WELCOME TO OUR NEW STUDENTS



Akdeniz Üniversitesi / Mühendislik Fakültesi

Computer Engineering Department



Akdeniz Üniversitesi / Mühendislik Fakültesi

Yapay Zeka ve Veri Mühendisliği

2024 - 2025

Orientation Meeting for New Students

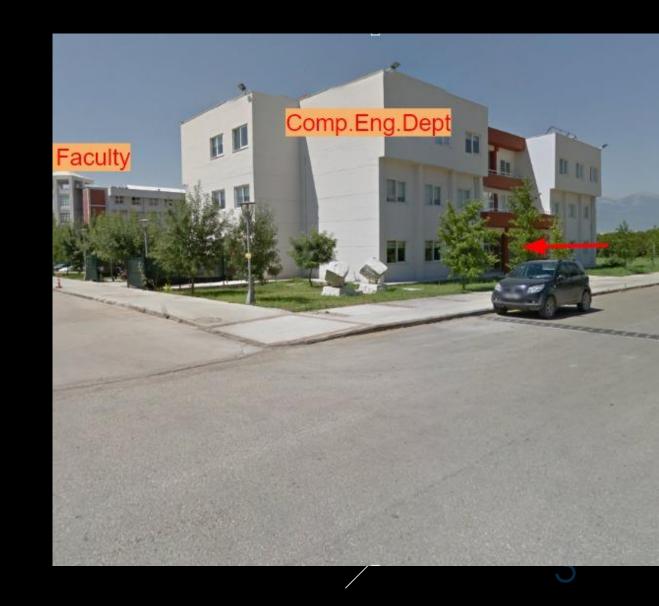
Prof. Dr. Ümit Deniz ULUŞAR Department Head

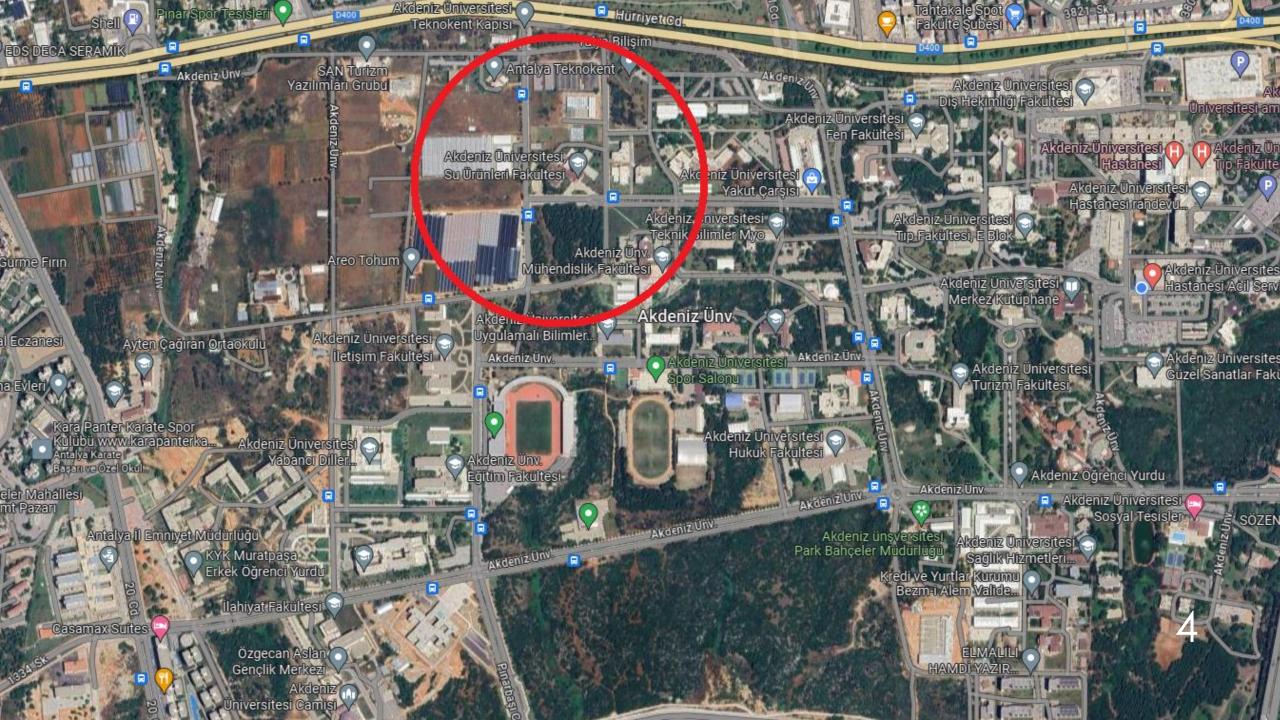
- Welcome and Introduction
- Overview of the Computer Engineering Department
- Academic Programs and Curriculum
- ▶ Facilities and Resources
- Clubs and Extracurricular Activities
- > Q&A

AGENDA

OUR DEPARTMENTS

- ➤ The Department of Computer Engineering at Akdeniz University was established in 2011. The Department of Artificial Intelligence and Data Engineering at Akdeniz University was established this year.
- Our programs are known to be top departments according to the results of the central entrance exam, showcasing the high level of academic excellence and competitiveness within our institution.
- We take pride in being the only department with MUDEK accreditation, reflecting our commitment to maintaining the highest standards of quality in engineering education.





AKDENIZ'DE ZİRVEDE OLURSUN



"Geleceğin İçin Doğru Tercih"

Akdeniz Üniversitesi Bilgisayar Mühendisliği Bölümü Yıllara Göre Taban Başarı Sırası

2023 Yılı Taban Başarı Sırası 24400

> Yıllara Göre **Taban Puan**



462,7 2019 2020







2023





2023 YILINDA "MÜDEK AKREDİTASYON" HEDEFİ

Hayallerinin Ötesinde



MÜDEK, mühendislik programlarının akreditasyonu konusundan Yükseköğretim Kalite Kurulu tarafından ulusal bir kalite güvence kuruluşu olarak tanınmaktadır.



MÜDEK, Avrupa Mühendislik Eğitimi Akreditasyonu Ağı **ENAEE** (European Network for Accreditation of Engineering Education) asil üyesidir.



Akdeniz Üniversitesi Mühendislik Fakültesi Bilgisayar Mühendisliği Bölümü, MÜDEK tarafından 01.05.2023 - 30.09.2025 tarihleri arasında geçerli olmak üzere 2 yıllığına akredite edilmiştir.

MÜDEK, EUR-ACE Etiketi vermek üzere **ENAEE** tarafından vetkilendirilmistir.



MÜDEK. Washington Accord üyesidir.





Faculty Members



Prof.Dr. Ümit Deniz Uluşar



Phone: +90 (242) 310 6382

Email: umitulusar@akdeniz.edu.tr

Ph.D.: University of Arkansas

M.Sc.: Bogazici University

B.Sc.: Marmara University

Research Interests

- Wireless Sensor Networks
- Software Engineering
- Medical Signal and Image Processing
- Cloud/Edge Computing



Prof.Dr. Melih Günay



Phone: +90 (242) 310 6324

Email: mgunay@akdeniz.edu.tr

Ph.D.: North Carolina State University

M.Sc.: North Carolina State University

B.Sc.: Istanbul Technical University

Research Interests

- Emerging Web Technologies
- Big Data Management and Cloud
- Data Science, Data Mining, NLP
- Robotics and IoT



Assoc.Prof.Dr. Alper Bilge



Phone: +90 (242) 227 4400 / 4311

Email: abilge@akdeniz.edu.tr

Ph.D.: Anadolu University

M.Sc.: Anadolu University

B.Sc.: Anadolu University

- Recommender Systems
- Artificial Intelligence
- Information Filtering
- Privacy



Asst.Prof.Dr. Murat Ak



Phone: +90 (242) 310 6352

Email: muratak@akdeniz.edu.tr

Ph.D.: Bilkent University
M.Sc.: Bilkent University
B.Sc.: Bilkent University

Research Interests

- Cryptography and Provable Security
- Network/Internet Security
- Theoretical Computer Science
- Block Chain Technologies



Assoc.Prof.Dr. Taner Danışman



Phone: +90 (242) 227 4400 / 4392

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PostDoc: Lille 1 University Science and Technology

Ph.D.: Dokuz Eylül University

M.Sc.: Dokuz Eylül University

B.Sc.: Dokuz Eylül University

Research Interests

- Computer Vision and Image Processing
- Digital Design / Computer Organization
- Face/Speech Recognition
- Parallel Computing and Operating Systems



Asst.Prof.Dr. Mustafa Berkay Yılmaz



Phone: +90 (242) 227 4400 / 4349

Email: berkayyilmaz@akdeniz.edu.tr

PostDoc: Télécom SudParis, École de technologie

supérieure ÉTS

Ph.D.: Sabancı University

M.Sc.: Sabancı University

B.Sc.: Bahçeşehir University

- Biometrics
- Pattern Recognition
- Computer Networks
- Human-Computer Interaction



Asst.Prof.Dr. Hüseyin Gökhan Akçay



Phone: +90 (242) 227 4400 / 4349

Email: hgakcay@akdeniz.edu.tr

Ph.D.: Bilkent University
M.Sc.: Bilkent University
B.Sc.: Bilkent University

Research Interests

- Remote Sensing
- Computer Vision and Image Processing
- Algorithms
- Machine and Deep Learning



Asst.Prof.Dr. Joseph William Ledet



Phone: +90 (242) 227 4400 / 4304

Email: josephledet@akdeniz.edu.tr

Ph.D.: Auburn University

M.Sc.: University of Louisiana at Lafayette

B.Sc.: Louisiana State University

Research Interests

- Software Engineering
- Model Driven Engineering SysML
- Computer Architecture
- Natural Language Processing



Asst.Prof.Dr. Alper Özcan



Phone: +90 (242) 227 4400 / 4352

Email: alperozcan@akdeniz.edu.tr

Ph.D.: Istanbul Technical University

M.Sc.: Istanbul Technical University

B.Sc.: Istanbul Technical University

- Social Network Analysis
- Bioinformatics
- Virtual and Augumented Reality
- Web and Text Mining

Research Assistants



Manolya Atalay



Phone: +90 (242) 227 4400 / 4354

Email: manolyaatalay@akdeniz.edu.tr

Ph.D.: Middle East Technical University (On Going)

M.Sc.: Akdeniz University

B.Sc.: Dokuz Eylül University

Research Interests

- Cryptography
- IoT Security
- Artificial Intelligence
- Neural Networks



Erdinç Türk



Phone: +90 (242) 227 4400 / 4354

Email: erdincturk@akdeniz.edu.tr

Ph.D.: Akdeniz University (On Going)

M.Sc.: Akdeniz University

B.Sc.: Akdeniz University

Research Interests

- Internet of Things
- Biomedical Signal Processing
- Computer Vision
- Embedded Systems



Melih Öz



Phone: +90 (242) 227 4400 / 4354

Email: melihoz@akdeniz.edu.tr

Ph.D.: Akdeniz University (On Going)

M.Sc.: Akdeniz University

B.Sc.: Akdeniz University

- Machine Learning
- Biomedical Image Processing
- Computer Vision



Taha Yiğit Alkan



Phone: +90 (242) 227 4400 / 4354

Email: yigitalkan@akdeniz.edu.tr

Ph.D.: Akdeniz University (On Going)

M.Sc.: Akdeniz University

B.Sc.: Suleyman Demirel University

Research Interests

- Data Mining
- Information Systems
- Software Engineering
- Design Patterns
- Deep Learning



Berk Ercin



Phone: +90 (242) 227 4400

Email: berkercin@akdeniz.edu.tr

M.Sc.: Akdeniz University (On Going)

B.Sc.: Kastamonu University

Research Interests

- Artificial Intelligence



Barış Doruk Başaran



Phone: +90 (242) 227 4400

Email: dorukbasaran@akdeniz.edu.tr

Ph.D.: Akdeniz University (On Going)

M.Sc.: Akdeniz University

B.Sc.: Akdeniz University

- Data Mining
- Data Science
- Artificial Intelligence
- Machine Learning

Computer Engineering Department



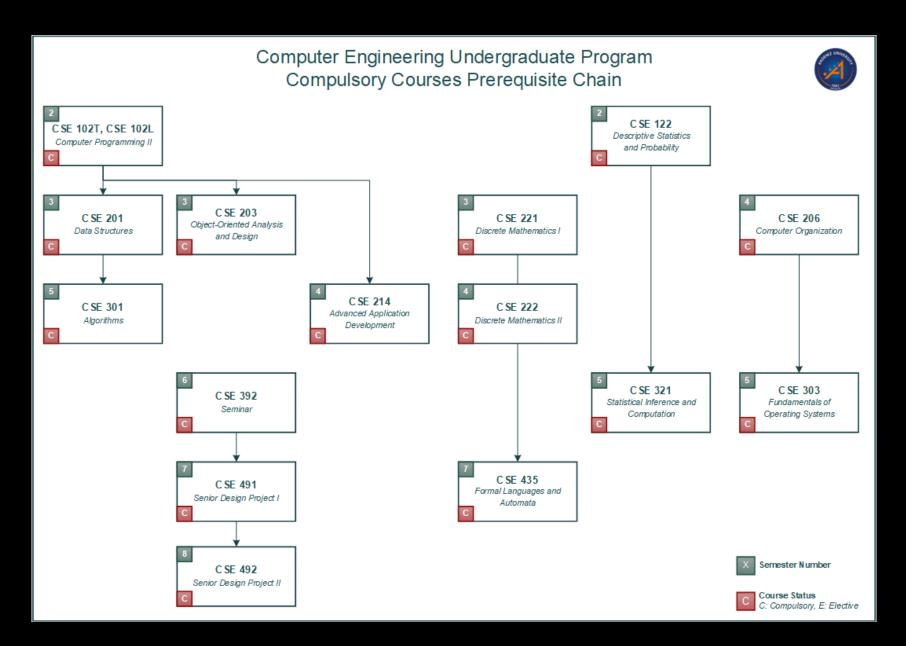
Üniversite Haberleri



COMPUTER ENGINEERING DEPARTMENT

Course Code (Course Name	T+A+L	Compulsory/Elective	ECTS
i CSE 101L	Computer Programming I Laboratory	0+2+0	Compulsory	4
i CSE 101T	Computer Programming I	3+0+0	Compulsory	4
i CSE 105	Introduction to Computer Science	2+0+0	Compulsory	2
i CSE 111	Physics for Computer Science I	2+2+0	Compulsory	6
i CSE 181	Natural Sciences	4+0+0	Compulsory	6
i MAT 163	Mathematics for Engineering I	4+2+0	Compulsory	6
i TDB 101	Turkish Language I	2+0+0	Compulsory	2
			Total ECTS	30
	2.Semester Course Plan	ו		
Course Code (Course Name	T+A+L	Compulsory/Elective	ECTS
i CSE 102L	Computer Programming II Laboratory	0+2+0	Compulsory	4
i CSE 102T	Computer Programming II	3+0+0	Compulsory	4
i CSE 112	Physics for Computer Science II	2+2+0	Compulsory	6
i CSE 122	Statistics for Engineering	3+1+0	Compulsory	6
i KPD 102	Career Planning	1+0+0	Compulsory	2
i MAT 164	Mathematics for Engineering II	4+2+0	Compulsory	6
i TDB 102	Turkish Language II	2+0+0	Compulsory	2
			Total ECTS	30

CONNECTED COURSES PART 1

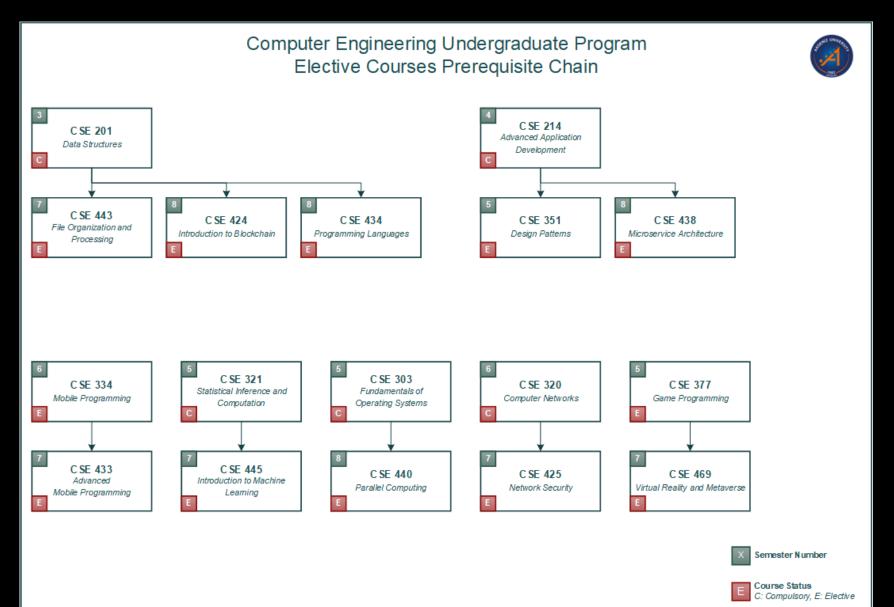


Keep your GPA > 1.80

MINIMUM GRADE: OC

13

CONNECTED COURSES PART 2



Keep your GPA > 1.80

MINIMUM GRADE: &C

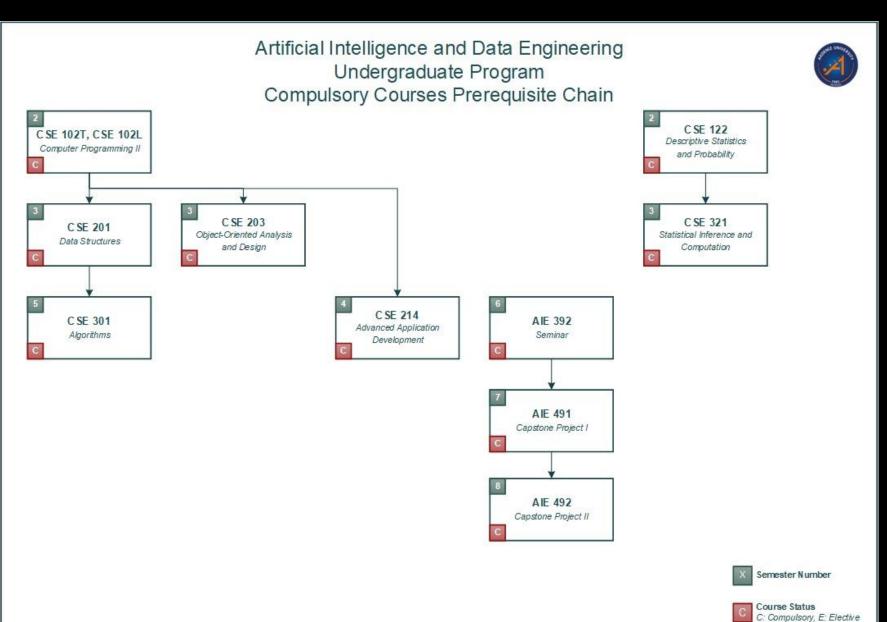
1. Sınıf / 1.	Yarıyıl					
Zorunlu Ders	ler					
Ders Kodu	Dersin Adı	Koşul*	Teorik Saati	Uyg/Lab. Saati	Ulusal Kredi	AKTS
CSE 101T	Computer Programming I		3	0	3	4
CSE 101L	Computer Programming I Laboratory		0	2	1	4
AIE 105	Introduction to Artificial Intelligence and Data Engineering		2	0	2	2
CSE 181	Natural Sciences		4	0	4	6
FİZ 173	Physics I		3	0	3	4
FİZ 175	Physics I Laboratory		0	2	1	2
MAT 151	Mathematics I		4	2	5	6
TDB 101	Turkish Language I		2	0	2	2
				Top	lam AKTS	30

1. 511111 / 2.	Larryn					
Zorunlu Ders	ler					
Ders Kodu	Dersin Adı	Koşul*	Teorik Saati	Uyg/Lab. Saati	Ulusal Kredi	AKTS
CSE 102T	Computer Programming II		3	0	3	4
CSE 102L	Computer Programming II Laboratory		0	2	1	4
CSE 122	Descriptive Statistics and Probability		3	1	4	6
FİZ 174	Physics II		3	0	3	4
FİZ 176	Physics II Laboratory		0	2	1	2
KPD 102	Career Planning		1	0	1	2
MAT 152	Mathematics II		4	2	5	6
TDB 102	Turkish Language II		2	0	2	2
				Top	olam AKTS	30

1 Smif / 2 Varivil

ARTIFICIAL INTELLIGENCE AND DATA ENGINEERING DEPARTMENT

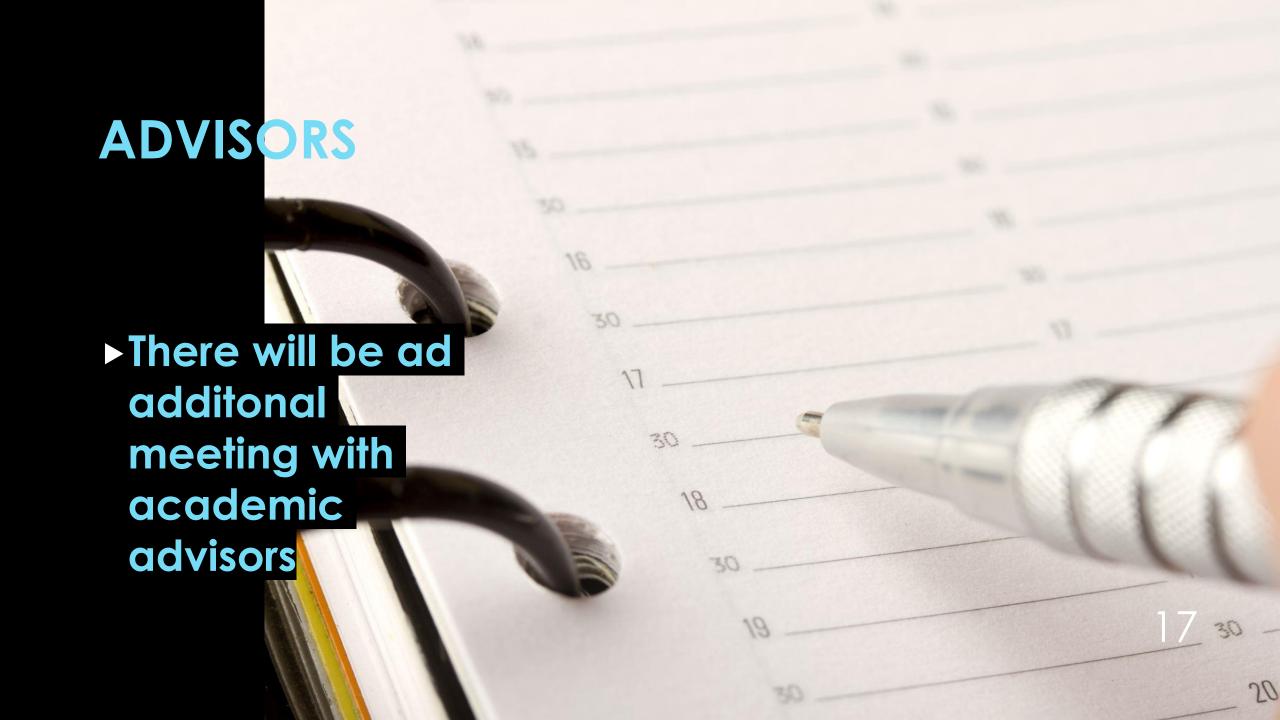
CONNECTED COURSES



Keep your GPA > 1.80

MINIMUM GRADE: &C

16



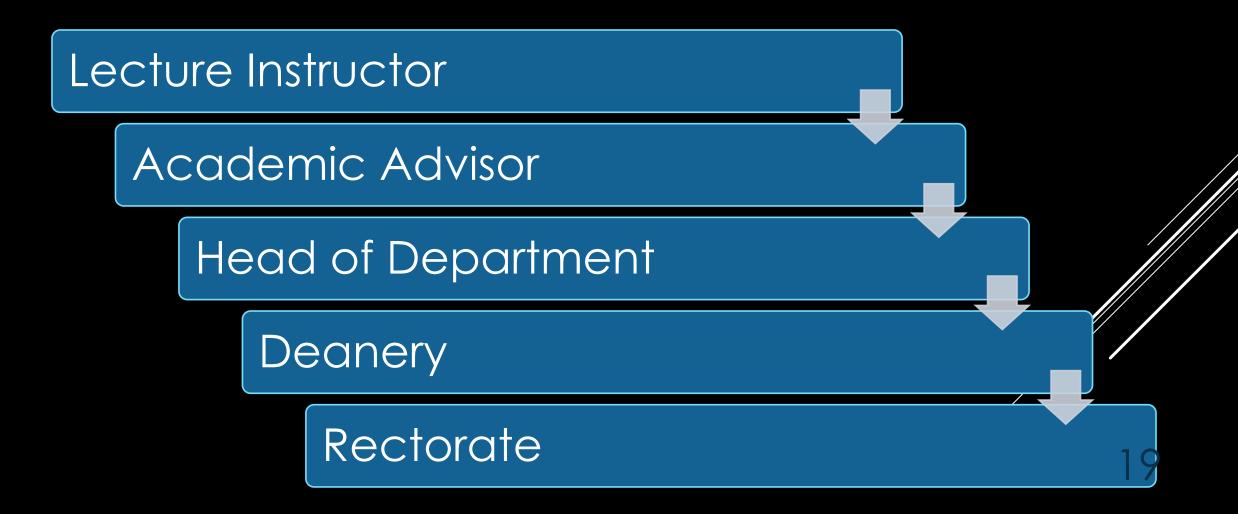
Yeni Kayıt Olan Önlisans ve Lisans Öğrencilerinin Kesin Kayıtları ve Yeterlilik Sınavları

Güz Yarıyılı	Yeni Kayıt Olan Öğrencilerin Kesin Kayıtları ve Yeterlilik Sınavları	Bahar Yarıyılı
19-21 Eylül 2024	Yeni Öğrencilerin Elektronik Kayıtlarının Yapılması(E-Devlet Üzerinden)	
19-23 Eylül 2024	Yeni Öğrencilerin Kayıtlarının Şahsen Başvurarak Yapılması	
ÖSYM tarafından ilan edilecektir	Ek Yerleştirme ile Kayıt Hakkı Kazanan Yeni Öğrencilerin Kayıtlarının Yapılması	
17-18 Eylül 2024	Yatay Geçiş İle Gelen Öğrencilerin Hazırlık Programı Yabancı Dil Düzey Belirleme ve Yeterlik Sınavı	
19 Eylül 2024	Yatay Geçiş İle Gelen Öğrencilerin Hazırlık Programı Yabancı Dil Düzey Belirleme ve Yeterlik Sınavı Sonuçlarının Duyurulması	(ie=e)
09 Eylül 2024	Hazırlık Programı Yabancı Dil Düzey Belirleme ve Yeterlik Sınavı (Yazma ve Test Bölümü)	
10 Eylül 2024	Hazırlık Programı Yabancı Dil Düzey Belirleme ve Yeterlik Sınavı (Konuşma Bölümü)	
12 Eylül 2024	Hazırlık Programı Yabancı Dil Düzey Belirleme ve Yeterlik Sınavı Sonuçlarının Duyurulması	
16 Eylül 2024	I. Modül Hazırlık Programı Derslerinin Başlaması	
10 Ocak 2025	I. Modül Hazırlık Programı Derslerinin Sona Ermesi	(mmm)
185	II. Modül Hazırlık Programı Derslerinin Başlaması	10 Şubat 2025

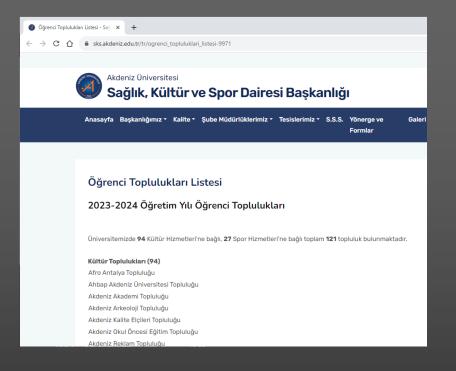
ACADEMIC CALENDAR

https://oidb.akdeniz.edu. tr/tr/yariyillik_onlisans_ve lisans_takvim-8179

ISSUES WORKFLOW







FACILITIES - CAMPUS

Department Website http://cse.akdeniz.edu.tr https://muhendislik.akdeniz.edu.tr Library https://kutuphane.akdeniz.edu.tr/ https://sks.akdeniz.edu.tr/ IT Department http://bidb.akdeniz.edu.tr/ Student Affairs https://oidb.akdeniz.edu.tr/ International Relations Office https://uio.akdeniz.edu.tr/ E-Kampus https://ekampus.akdeniz.edu.tr/

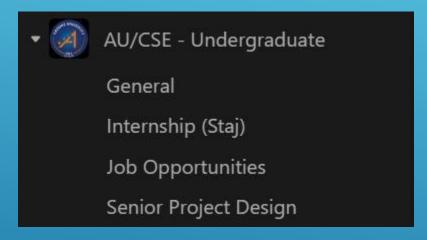
RESOURCES - CAMPUS

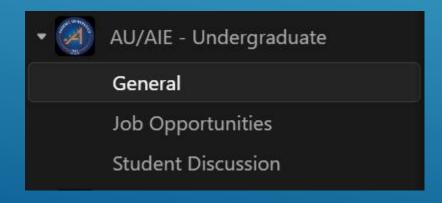
E-KAMPUS AND EDUROAM

- ► Students can connect to the eduroam wireless network using the @ogr.akdeniz.edu.tr Enter your student number and verification code at http://ekampus.akdeniz.edu.tr/hesap/sifre.aspx and click the Verify button.
- ➤ Your Eduroam account is: studentnumber@ogr.akdeniz.edu.tr For new applications, your Eduroam user will be active immediately. Your user will be approved within 1 day to use Office365, Microsoft Azure and Imagine services.
- ► Eduroam connection settings can be found at: https://eduroam.akdeniz.edu.tr/tr/eduroam_baglanti_ayarlari-8051



MICROSOFT TEAMS

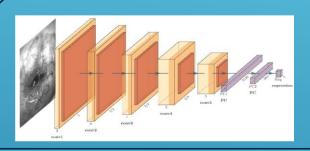


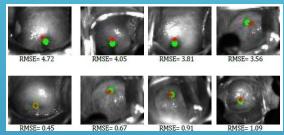


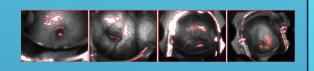


RESEARCH OPPORTUNITIES



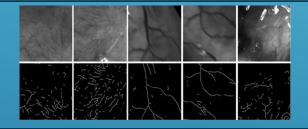




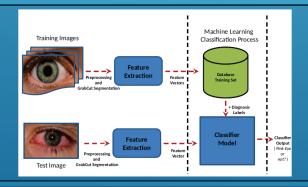


Göz segmentasyonu

Cervical Neoplasia Detection Assoc. Prof. T. Danisman



Vessel Segmentation for Cancer Detection

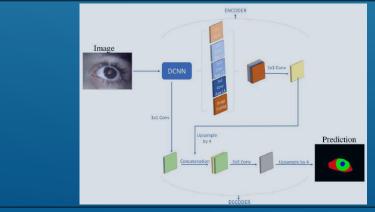




Automatic red-eye detection (Adenoviral Conjunctivitis)

Automated detection of adenoviral conjunctivitis disease from facial images using machine learning

M Gunay, E Goceri, T Danisman





Automatic Eye Segmentation

The Use of Synthetic Data to Facilitate Eye Segmentation Using Deeplabv3+ Melih Öz,*, Taner Danışman, Melih Günay, Esra Zekiye Şanal, Özgür Duman and Joseph William Ledet

A Hybrid Densenet121-unet Model For Brain Tumor Segmentation From MR Images

N Cinar, A Ozcan, M Kaya Biomedical Signal Processing and Control 76, 103647, March 2022

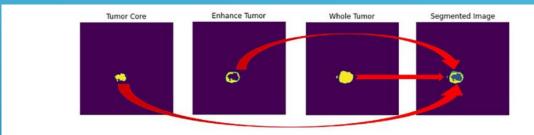


Fig. 7. After the brain MR images are trained with the proposed architecture, postprocessing is performed. In this process, images divided into 64x64 size pieces are combined using coordinate data and converted back to their original size.

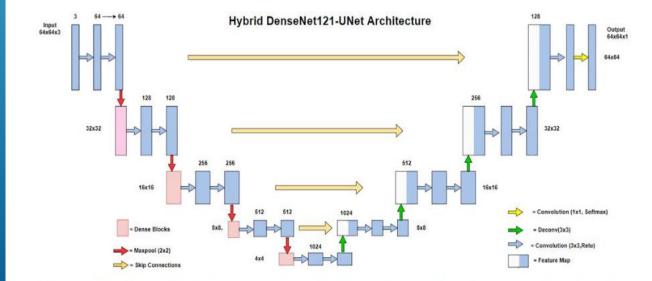
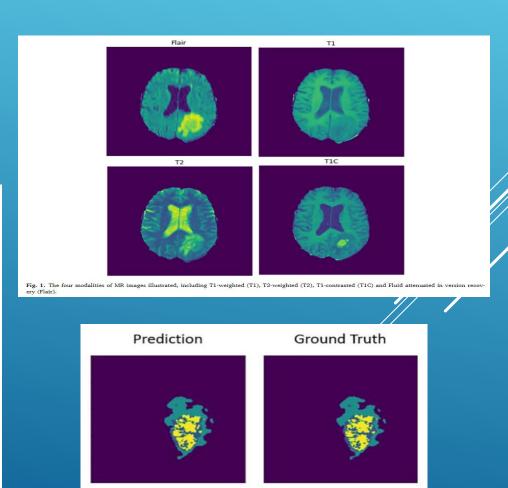


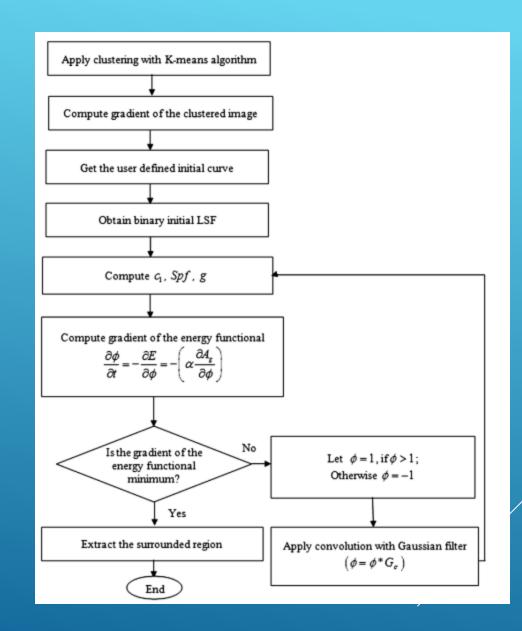
Fig. 6. The proposed hybrid DenseNet121-UNet architecture consists of 2 parts. In the first part, the DenseNet121 model is used as an encoder. In the second part, the UNet model is used as a decoder.



Automated Detection Of Facial Disorders (ADFD): A Novel Approach Based-on Digital Photographs

Evgin Goceri & Melih Gunay (2018)
Computer Methods in Biomechanics and
Biomedical Engineering: Imaging &
Visualization

Areas of interest were separated and classification of dermatological disorders was performed using K-Means clustering and image processing.











Automated Skull, Tissue, and Lesion Segmentation from MR Head Images: A Probabilistic and Stable Approach

Evgin GÖÇERİ, Melih GÜNAY, Utku ŞENOL

Akdeniz Üniversitesi



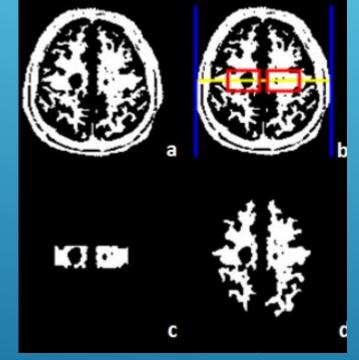
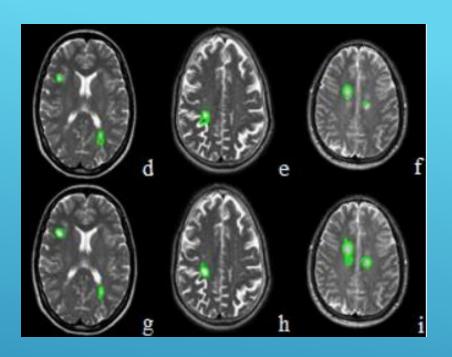


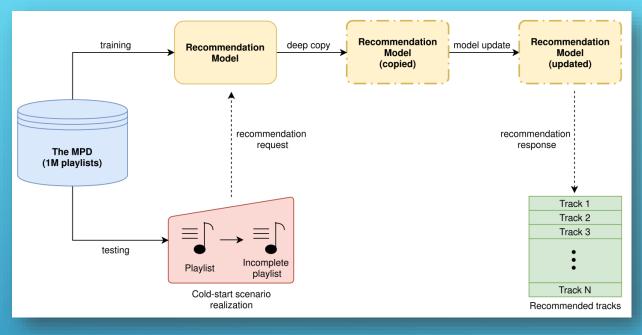
Image obtained by classification



Lesion images obtained by SIGSDDK method

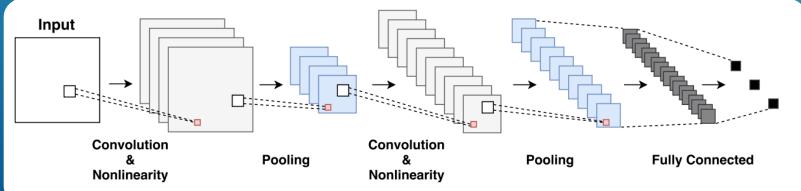
Recommendation Systems:
Creation of deep neural network
models that recommend new tracks
to music listeners using hidden
semantic information.

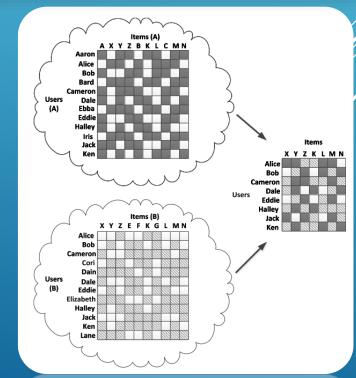
Alleviating the cold-start playlist continuation in music recommendation using latent semantic indexing



Yürekli, A., Kaleli, C. & Bilge, A. Alleviating the cold-start playlist continuation in music recommendation using latent semantic indexing.

Int J Multimedia Information Retrieval 10, 185–198 (2021)



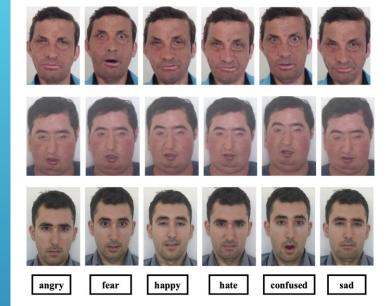


Artificial Intelligence Assisted Emotional Expression Detection in Facial Transplant Patients

Bedeloglu, Merve, Topcu, Cagdas; Akgul, Arzu; Doger, Ela Naz; Sever, Refik; Ozkan, Ozlenen; Ozkan, Omer; Uysal, Hilmi; Polat, Ovunc; Colak, Omer Halil

Healthy group results (Region: Eye-mouth combination, Method specific: gabor-lbp-gaborlbp combination) 0% hanny hate neutral confised sad

70	angry	Icai	парру	пас	neuuai	comused	sau
angry	97.778				2.222		
fear		93.333				6.667	
happy			100				
hate				100			
neutral					100		
confused						100	
sad							100



Why Important:

Evaluation of the Recovery Process Determination of Rehabilitation Procedures

Table 2 Case 1 transplant patient results (Region: Eye-mouth combination, Method specific: gabor-lbp-gaborlbp combination)

%	angry	fear	happy	hate	neutral	confused	sad
angry	10						90
fear		80				20	
happy		10	20	20	10	10	30
hate				10			90
neutral	10		30	10	30	10	10
confused	10	20		10		30	30
sad							100

Table 3 Case 2 transplant patient results (Method: Gabor, Region specific: eye-mouth-eyemouth combination)

%	angry	fear	happy	hate	neutral	confused	sad
angry	20	20	20		30	10	
fear		20	80				
happy		20	70			10	
hate		80		10	10		
neutral	10	10	10	20	20	30	
confused		20	10	20		40	10
sad		60	20			10	10



IoT-Driven Electronic Stethoscope for Automatic Detection of Bowel Sounds

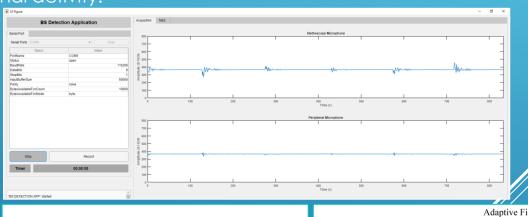
- Turk, E., Ulusar, U.D., Ogunc, G., Canpolat, M., Yaprak, M. (2021). Active Noise Cancellation for IoT-Driven Electronic Stethoscope: A Comparative Study of Adaptive Filters. In: Ever, E., Al-Turjman, F. (eds) Forthcoming Networks and Sustainability in the IoT Era. FoNeS-IoT 2020. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 353. Springer, Cham. https://doi.org/10.1007/978-3-030-69431-9_2
- Ulusar, U.D., Turk, E., Oztas, A.S., Savli, A.E., Ogunc, G., Canpolat, M. (2019). IoT and Edge Computing as a Tool for Bowel Activity Monitoring. In: Al-Turjman,
 F. (eds) Edge Computing. EAI/Springer Innovations in Communication and Computing. Springer, Cham. https://doi.org/10.1007/978-3-319-99061-3
- Ulusar, U.D.: Recovery of gastrointestinal tract motility detection using Naive Bayesian and minimum statistics. Comput. Biol. Med. 51, 223–228 (2014). https://doi.org/10.1016/j.compbiomed.2014.05.013

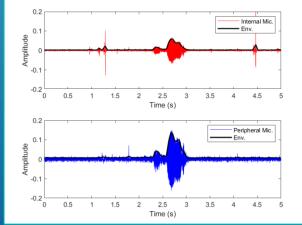
We have developed an IoT-guided Electronic Stethoscope specifically designed to monitor continuous bowel activity of hospitalized patients after abdominal surgery. Active Noise Cancellation methods used for noise reduction have been developed. Naive Bayesian and Minimum Statistics used for recognition of intestinal activity.

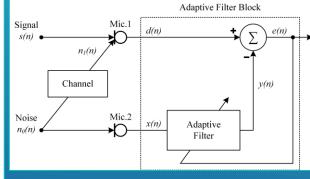




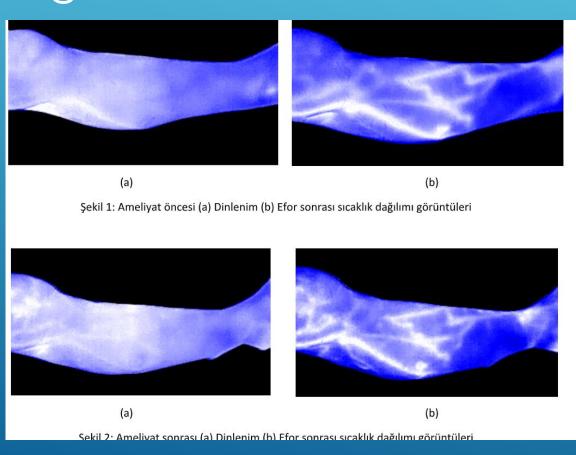








Monitoring Peripheral Artery Disease with Thermal Imaging/Image Processing and Artificial Intelligence Algorithms

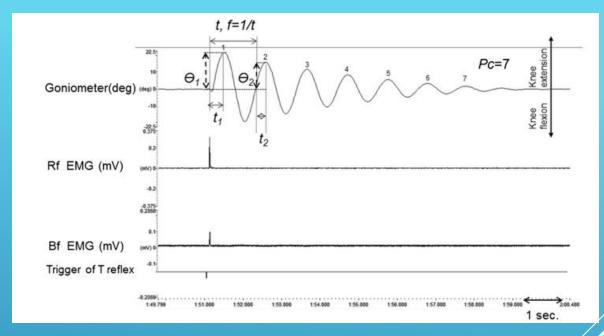


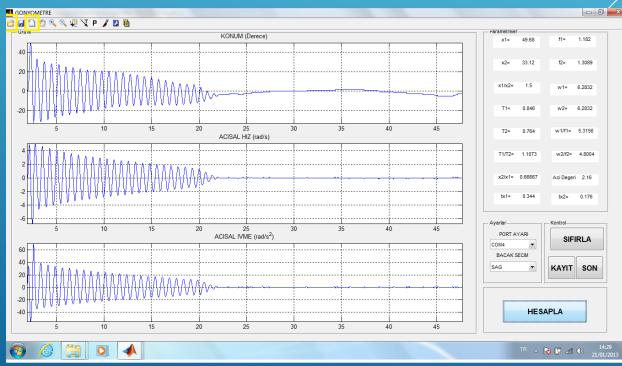
- Pre-treatment image is taken,
- After the treatment image is taken,
- The difference/ratio between the images is detected,
- Detected differences are trended,
- The trend is evaluated with artificial intelligence,
- It gives a warning when there is significant difference between the beginning and the beginning,
- Prospective monitoring and planning of carried out by following the trend.

Signal Processing and Artificial Intelligence in Neurology

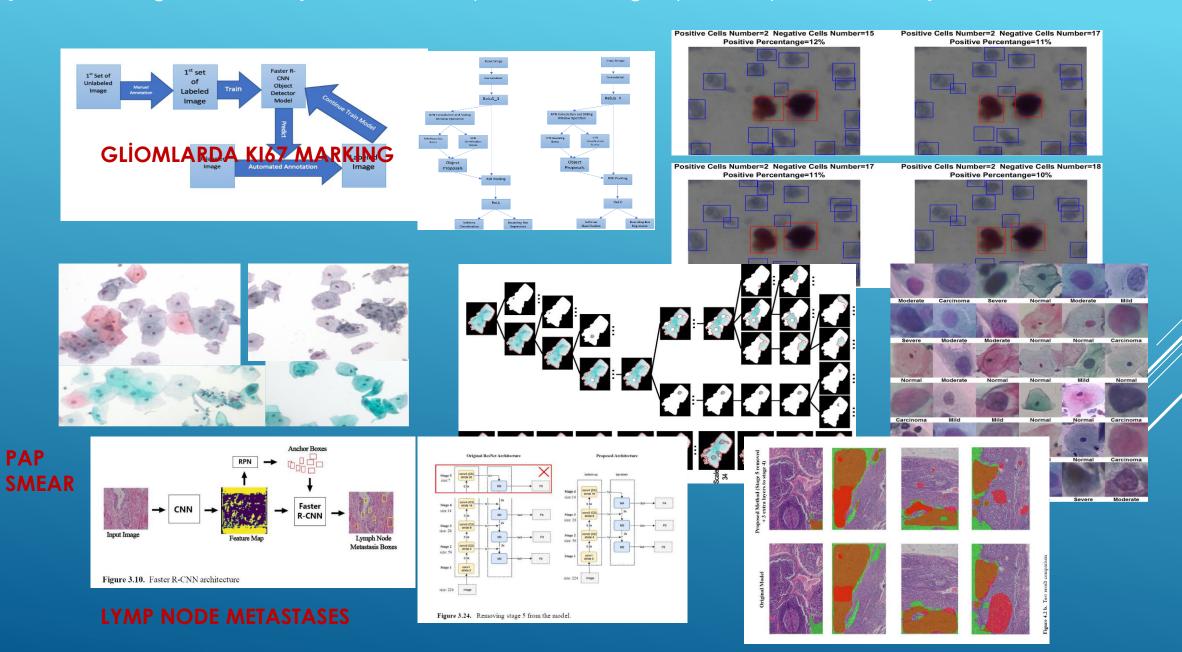
In this way, feature extraction was made from pendulum signals over goniometer for neurological disorders.







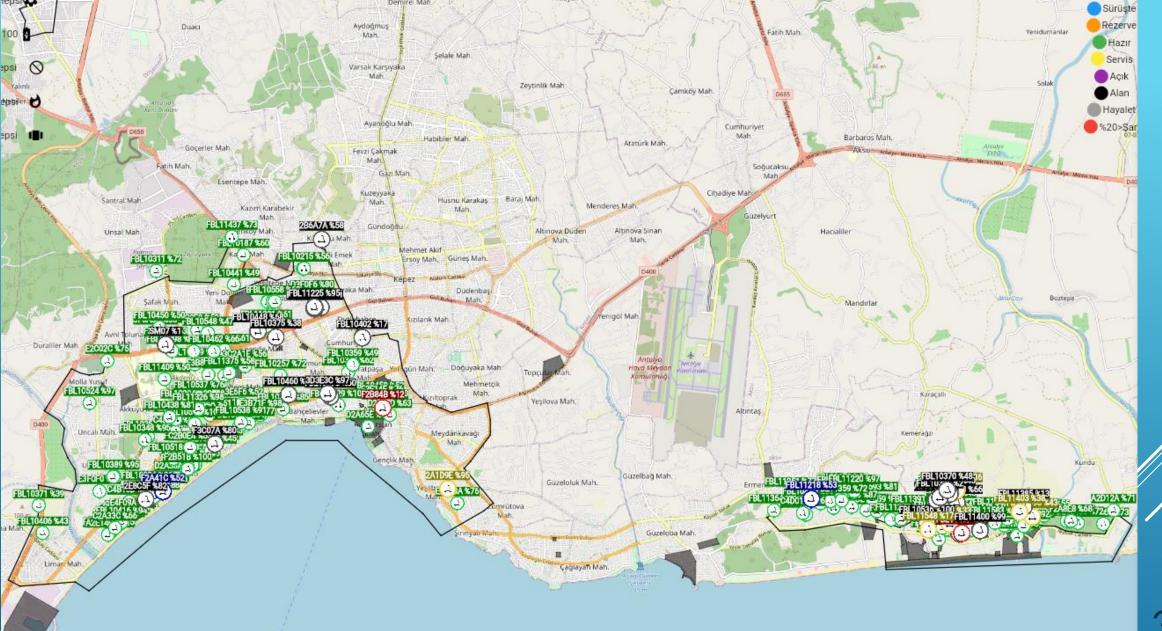
Fusion Planet: Past, Today and Future of Computer Scientific Solutions in Digital Pathology. Arş. Gör. Taha Yiğit ALKAN, Doç. Dr. Havva Serap TORUN, Dr. Öğr. Üyesi Hüseyin Gökhan AKÇAY



Fusion Planet: Past, Today and Future of Computer Scientific Solutions in Digital Pathology.

ICOFMEP'21

Taha Yiğit ALKAN, Assoc. Prof. Havva Serap TORUN, Asst. Prof. Hüseyin Gökhan AKÇAY ■ b-9098-19.15. B-13575-18-4. B-13575-18-4. 8-13575-18-4. B-13575-18-4_ B 5-9098-19-15... B 5-9098-19-15. **■** b-9098-19-15. b-9098-1915.



QUESTIONS ?

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 - https://www.linkedin.com/in/akdeniz %C3%BCniversitesi-artificial-intelligence-and-dataengineering-799008316/?originalSubdomain=tr





CONGRATULATIO NS

- It is quite a bit accomplishment < 24500
- You are not here by luck. You worked hard.
- You had determination and motivation and support of your family...



CONGRATULATIONS

- As not easy to get in also not easy to get out because;
- We are not here to give you grades/diplomas but education and skills
- We are interested in you getting the best job, Doing the best in your job.
- At the end. It is up to you...You must discover what are you good at.
- All of you can do at least one thing well.

- ► There is work but there is not enough skilled employees, so companies are having hard time finding employees
- ▶ We are having hard time recommending students to industry.
- ▶ A good employee is not the best coder always for us

GRADUATING IS NOT EVERYTHING

- ▶ We hope you will use the opportunities exist @ Akdeniz to develop
- Academically
- **▶** Emotionally
- ▶ Independently
- ▶ Professionally
- ▶ By becoming part of the community...
- Active in student organizations
- ► Learn from mentors (2nd 3rd and 4th year)
- ► Artistic, Leadership skills

OPPORTUNITIES

- ▶ Work hard from DAY 1
- ► Contact your Advisor if any concerns and questions
- ► AIM Erasmus * Grades and English matters
- ► Take TOEFL, SAT, YDS, ALES ...
- **▶** Get Busy NEXT and every Summer
- **▶** Visit Library Frequently
- ► Finish your school in Time.
- ▶ Be part of projects of Faculty, Visit Teknokent for volunteer work

SO.... SOME PRACTICAL ADVICE

- ► Each course is important. There is a reason why we teach Physics, Calculus
- ► English is critical for you both in profession and in everyday life ...
- Use of Turkish/English is what gets you a good job/promotion
- ► Participate in artistic activities.. Without art and aesthetics, you will be limited ...
- ▶ Be professional always and respect others
- ► Keep your GPA > 1.80

MORE PRACTICAL ADVICE