ILKIN ISLER
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PROFESSIONAL SUMMARY

A highly motivated Ph.D. candidate in Computer Science with a focus on developing explainable and trustworthy AI systems for medical imaging. Skilled in deep learning, computer vision, and AI explainability, seeking opportunities to apply expertise and continue professional growth in these areas.

EDUCATION

University of Central Florida, College of Engineering and Computer Science — **December 2024***
Doctor of Philosophy in Computer Science — Orlando, FL

University of Central Florida, College of Engineering and Computer Science — **Dec 2022**
Master of Science in Computer Science — Orlando, FL

Hacettepe University, Department of Computer Science — **May 2020**
Bachelor of Science in Computer Science — Ankara, Turkey

WORK EXPERIENCE

University of Central Florida, College of Engineering and Computer Science — Orlando, FL
Graduate Teaching Assistant — **Aug 2023 - Present**

- Assisting with Advanced Artificial Intelligence and Advance Computer Networks courses.

Graduate Research Assistant — **Jan 2020 - Aug 2023**

- Conducted research on explainability and uncertainty in deep learning algorithms to enhance organ-at-risk and tumor segmentation, as well as outcome prediction in radiation oncology.
- Contributed to the development of tools for medical image visualization, aiding clinicians in interpreting complex imaging data effectively.
- During summer 2023, I worked in-person at the Machine and Hybrid Intelligence Lab within Northwestern Radiology in Chicago.

Universal Orlando Resort, BAIE Department — Orlando, FL
Python Developer — **May - Oct 2022**

- Corrected 100+ vulnerabilities in BAIE Department's scripts, enhancing system security and stability.
- Collaborated with Microsoft Azure Databricks, Apache Spark, Synapse, and SQL to migrate and optimize cloud script performance.
- Optimized model performance using ML Flow within Databricks.

Simsoft Information Technologies — Ankara, Turkey
Data Analyst — **Jan - Aug 2020**

- Implemented LSTM models for predictive maintenance and anomaly detection.
- Simulated COVID-19 spread using mathematical models to analyze disease transmission and population impact.

University of Central Florida, Synthetic Reality Lab — Orlando, FL
Research Intern — **Jul - Sep 2019**

- Utilized Generative Adversarial Networks (GANs) for facial expression recognition.

Carbon Health — San Francisco, CA
Data Analyst Intern — **Jul - Sep 2018**

- Curated data and predicted outcomes with machine learning.
- Applied statistical methods for data validation and hypothesis testing.
- Devised solutions using machine learning to cut clinic wait times by 30% and forecast patient appointment durations, enhancing clinic efficiency.

SKILLS

TECHNICAL: Python, Pytorch, MONAI, Java, C, SQL, Microsoft Azure Databricks, Apache Spark, Synapse, Artificial Intelligence, Machine Learning, Computer Vision, Medical Imaging, Data Science, Software Development, Cloud Computing.

LANGUAGES: English (fluent)**,** Turkish (native)

ACADEMIA

I. Journals

- U. Gulec, **S. I. Isler**, M. H. Doganay, M. Gokcen, M. A. Gozcu and M. Denizci Nazligul (2022). Power-VR: Interactive 3D Virtual Environment to Increase Motivation Levels of Powerlifters during Training Sessions, Computer Animation and Virtual Worlds.

II. Peer-reviewed conference articles (full papers)

- **Isler**, D. Jha, C. Lisle, J. Rineer, P. Kelly, B. Aydogan, M. Abazeed, D. Turgut, and U. Bagci (2023). *Self-Supervised Learning for Organs At Risk (OARs) and Tumor Segmentation with Uncertainty Quantification*. (ICECCME IEEE 23')
- **Isler, S.I**, Curtis Lisle, Justin Rineer, Patrick Kelly, Damla Turgut, and Ulas Bagci (2021). *Enhancing Organ at Risk Segmentation with Improved Deep Neural Networks*. (SPIE 22' Medical Imaging)
- Ali, K., **Isler, I.**, & Hughes, C. E. (2019). *Facial Expression Recognition Using Human to Animated-Character Expression Translation*. arXiv: 1910.05595v1 [cs.CV].

III. Other publications

- **S. Isler**, M. H. Doganay, M. Gokcen & U. Gulec (2019). *Usage of 3D Modelling and Morphing Tools in Plastic Surgery*, 2019 National Software Engineering Symposium (UYMS), İzmir Institute of Technology, İzmir, Turkey.

IV. Peer Reviewing

- Medical Physics, American Association of Physicists in Medicine
- IEEE, Journal of Biomedical and Health Informatics
- IEEE, Transactions on Medical Imaging

ADDITIONAL CREDENTIALS

Hacettepe University Programming Contest (HUPROG) **May 2017**
Organizer and member of the question preparation team; It was our university's first and only programming contest. Our team consisted of 8 individuals. The contest drew great attention, with participating students all over the country.

WORKSHOPS/CONFERENCES

- **Presenter,** *SPIE Medical Imaging 2022,* San Diego, CA **Feb 2022**
- **Participant,** *MIDL Doctoral Symposium,* Virtual **July 2021**
- **Participant,** *Trustworthy AI for Imaging-based Diagnoses (IEEE EMBS),* Virtual **June 2021**
- **Team member,** *University of Central Florida Research Experiences (NSF REU),* Orlando, FL **May 2021**
- **Team member,** *EurasiaGraphics'20*, Virtual **Oct 2020**
- **Participant,** *IEEE Turkey Computer Society Congress (CSCON'19)*, Ankara, Turkey **Mar 2019**
- **Participant,** *Turkey Artificial Intelligence Summit (TRAI'19)*, Istanbul, Turkey **Mar 2019**

HONORS & AWARDS

- Fellowships
  - MI22 Student Conference Support **Dec 2021**
  - UCF College of Graduate Studies Presentation Fellowship **Nov 2021**
- Competitive powerlifter
  - 4 x USA Powerlifting FL state record holder
  - Rosie the Riveter Women's Championship – 1st Place Overall **Mar 2022**
  - Powerlifting Championship of Turkey – 1st Place Overall & Record Holder **Feb 2020**
  - Powerlifting Championship of Turkey – 1st Place Overall & Record Holder **Feb 2018**
  - IPSU European Championship – 2nd Place Overall **May 2017**