

Cengiz Ozel

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EDUCATION

Georgia Institute of Technology

Master of Science, Computer Science

- Specialization in Machine Learning

Atlanta, GA

Aug 2023 - present

University of Rochester

Bachelor of Science, Computer Science

Rochester, NY

Aug 2018 - Aug 2022

EXPERIENCE

Saudi Authority for Data and Artificial Intelligence

AI Engineer - Remote

Riyadh, Saudi Arabia

Nov 2023 - present

- Lead Flask backend development to enhance an AI tutoring model with automated quiz features and migrate the system from AWS EC2 to Azure Virtual Machine.
- Create SQLite databases for a queue system and a waitlist, offering users real-time wait time estimates.
- Integrate Google Cloud's Credentials API for secure Google authentication on the website.
- Integrate webcam data and efficient database operations for real-time emotion and attention analysis, significantly improving system responsiveness and user engagement.
- Utilize Apache for scalable instance management of the Flask application, ensuring each user has a dedicated session.

University of Rochester - Rochester Human-Computer Interaction Lab

Research Assistant

Rochester, NY

Jun 2022 - Nov 2023

- Contributed to a medical training chatbot utilizing LLMs through the OpenAI API and high-fidelity human avatars using Unreal Engine 5's MetaHuman framework for end-of-life conversation simulations.
- Boosted learning outcomes by creating a webpage for communication skill assessment and optimizing a feedback system, leading to measurable improvements in student performance post-conversation.
- Developed a Unity-based computer vision pipeline for hand pose estimation using C# and Python, capable of generating 500,000 annotated synthetic hand images within 24 hours.
- Used OpenCV for data augmentation and visualization, and converted datasets from CSV to COCO JSON.
- Trained models using Microsoft HRNet and VitPose on the synthetic dataset, achieving a Percentage of Correct Keypoints (PCK) of 96.08%, nearing state-of-the-art performance in hand pose estimation.
- Trained hand detection models using Faster R-CNN and YOLOv7 with PyTorch, identifying bounding boxes as a preprocessing step for targeted hand pose estimation.

University of Rochester

Teacher Assistant - Introduction to CS, Matlab for BME

Rochester, NY

Sep 2020 - May 2022

- Facilitated bi-weekly Java and MATLAB lab sessions, enhancing course content and student engagement, leading to high assignment completion rates.
- Provided prompt, detailed feedback on coursework, raising course satisfaction and learning outcomes.

PUBLICATIONS

- SAPIEN: Affective Virtual Agents Powered by Large Language Models. Masum Hasan, **Cengiz Ozel**, Sammy Potter, Ehsan Hoque, **ACIW 2023**

SKILLS

- Programming Languages: Python, Java, C, C#, C++, MATLAB, R, JavaScript, Swift, SQL
- Machine Learning: Linear/Logistic Regression, Reinforcement Learning, Transformers, PyTorch
- Courses: Data Mining, Web Programming, Mobile App Development, Design and Analysis of Efficient Algorithms, Computational Introduction to Statistics
- Cloud Technologies: Google Cloud Platform (GCP), Amazon Web Services (AWS), Microsoft Azure
- Languages: Fluent in English and Turkish