Ozan Erdal

http://oerdal.me

Email : ozanerdal98@gmail.com
Mobile : +1-714-679-5036

Education

- **University of Southern California** — Los Angeles, CA
  Master of Science in Computer Science; GPA: 3.70 — *Aug. 2021 – Aug. 2023*
- **University of Washington** — Seattle, WA
  Bachelor of Science in Applied and Computational Math Sciences; GPA: 3.45 — *Sept. 2016 – Aug. 2020*

Experience

- **ARCADIS** — Irvine, CA
  Management Consultant — *June 2021 - Sep. 2023*
  - Building and using machine learning tools to QA/QC existing projects and advise operations.
  - Working directly with subject matter experts to integrate artificial intelligence into the domains of civil and environmental engineering.
  - Developing master plans and documentation for large scale developments.
  - Creating and presenting design and analysis outcomes to key shareholders using ArcGIS Pro, ArcMap, and the various ESRI scripting toolkits.
  - Regularly using Python, MATLAB, ESRI, SQL Server Management Studio, and other industry standard tools and technologies for project development and review.

Projects

- **Multimodal Emotion Detection and Sentiment Analysis**
  Graduate Research — *Mar. 2023 - May 2023*
  - Performed a review of multimodal synthesis techniques and their relevance in applied natural language processing (NLP).
  - Built numerous unimodal text-to-emotion and speech-to-emotion machine learning models and benchmarked them against IEMOCAP, a modern industry standard dataset.
  - Leveraged modern synthesis techniques to create a transformer-based multimodal model for emotion detection using text and speech modes.
- **3-D Graphics Renderer**
  Graduate Project — *Mar. 2023 - May 2023*
  - Programmed a scan conversion renderer from scratch in python for use with 2-D and 3-D graphics scene and object files as input.
  - Implemented camera transformations and provided functionality such as colored ambient, diffuse, and specular lighting as well as basic texturing.
  - Worked on subsequent group work and a presentation showcasing additional features such as procedural texturing and ray tracing as add-ons to the base renderer.
- **M.L. Applications in Potable Reuse**
  Independent Research — *Dec. 2020 - June 2021*
  - Worked with the Orange County Water Disctrict (OCWD) as well as a confidential Southern California agency pilot advanced water treatment facility.
  - Built an artificial neural network (ANN) based platform to predict third stage membrane fouling and power consumption of the RO systems at OCWD.
  - Applied advanced data analysis and A.I. concepts and an ANN to predict the TOC content of product water – a critical parameter to assess suitability of water for potable consumption.
- **Recommendation System**: Music and Movie recommender systems using collaborative filtering on public datasets.

Programming Skills

- **Languages**: **Python, Javascript, Java, MATLAB**, SQL, C++
- **Technologies and Libraries**: Pytorch, Git, Terminal, ArcGIS Pro, React