ALLEN TING

allen.ting@utexas.edu | linkedin.com/in/allen-ting | 281-851-2216 | Austin, TX

EDUCATION

The University of Texas at Austin Bachelor of Science in Computer Science — Graduation: May 2024
Minor in Communications — GPA: 3.95/4.00

SKILLS

Courses: Data Structures, Algorithms, Probability & Statistics, Operating Systems, Machine Learning, Computer Vision, NLP
Languages & Skills: Python, Java, C, SQL/PostgreSQL, MATLAB, JavaScript, React, Git, Agile, Docker, AWS, Azure, RESTful API
Data Science: NumPy, Pandas, Matplotlib, Jupyter, TensorFlow, PyTorch, Scikit-learn, Deep Neural Networks, Visualization

EXPERIENCE

Dell Technologies – *Software Engineering Intern, ML/AI Ops* *May 2023 – Aug 2023*

- Developed a storage sustainability feature in a team of 5, enabling about $1 million in electricity savings yearly.
- Used Python, SQL, Git, and data science techniques to create visuals, perform time series forecasting, and predict customer workloads on 220 million rows of telemetry data from Dell's enterprise data storage products.
- Built pipelines in Microsoft Azure's cloud infrastructure to migrate data and train highly accurate ML models.
- Managed a robust data interface, integrating ML algorithms and predictive statistical models into the project.

Los Alamos National Laboratory – *Machine Learning Research Intern* *June 2022 – Aug 2022*

- Applied state-of-the-art machine learning, deep learning, and computer vision models, utilizing GPUs for training,
- Developed a novel deep convolutional neural network (CNN) architecture in Python and TensorFlow to predict the displacement of water by liquid CO_2 for carbon storage in subsurface fractures, achieving 95% accuracy.
- Engineered a data pipeline transforming large-scale time-dependent 3D simulations into 2D images.
- Communicated results to broad audiences through a peer-reviewed publication, presentations, and posters.

UT Austin College of Natural Sciences – *Undergraduate Research Fellow* *Aug 2020 – Jul 2021*

- Analyzed energy industry problems and developed code in a team-based, collaborative Agile environments using AI models, machine learning algorithms, statistical methods, and data science techniques in Python.
- **Orphan Well Database** – *Skills: PostgreSQL, AWS RDS, Scikit-Learn, Git* *Jun 2021 – Aug 2021*
  - Deployed a PostgreSQL database with 10 million rows on AWS and conducted analysis with ML models.
- **Reinforcement Learning and EVs** – *Skills: TensorFlow, PyTorch, Git* *Jan 2021 – May 2021*
  - Implemented a reinforcement learning model to optimize EV charging station sites with real-world data.
- **Oil Basin Analysis** – *Skills: Jupyter Notebook, Matplotlib, Scikit-Learn* *Aug 2020 – Dec 2020*
  - Predicted recoverable oil reserves using supervised machine learning algorithms to propose well locations.

RESEARCH PUBLICATIONS

- Ting, A.K.; Santos, J.E.; Guiltinan, E. (2022). Using Machine Learning to Predict Multiphase Flow through Complex Fractures. *Energies*, *15*, 8871.
- Petratos, A., Padmanabhan, S., Ting, A., Zhou, K., Hageman, D., Pisel, J., & Pyrcz, M. (2021). Optimal Placement of Public Electric Vehicle Charging Stations Using Deep Reinforcement Learning. arXiv.

PROJECTS

Face Detection System *Jan 2023 – May 2023*

- Implemented a machine learning-based framework in MATLAB to classify human faces with 90% accuracy.
- Analyzed multiple statistical models and extracted useful features from image data to improve model performance.

FindMyMarket *Aug 2022 – Dec 2022*

- Built a dynamic website hosted on AWS and designed a RESTful API to display data promoting local markets.
- Drove backend development using Python, Flask, and PostgreSQL to create databases, queries, and API endpoints.
- Utilized aspects of the software development life cycle such as unit tests, CI/CD, Docker, and Git for version control.

ACTIVITIES & INTERESTS

Awards: Mickey Leland Energy Fellow (2022), UT College Scholar (2022 – Present), CVR Energy Scholarship (2020)
The Ransom Notes A Cappella Group – *President* *Sep 2021 – Present*
UT Computer Science Roadshow – *Vice President* *May 2022 – Present*

- Communicated with K-12 schools in Austin to plan outreach events introducing computer science to students.

UT RecSports – *Teaching Assistant* *Jan 2023 – May 2023*