

AUDREY NGUYEN

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Education

University of California, Irvine | *Master of Science in Computer Science* | GPA 3.85 September 2024 - December 2025

Relevant Coursework: Neural Networks & Deep Learning, Transaction Processing and Distributed Data Management, Distributed Computer Systems, Data Structures, Light and Geometry in Computer Vision

University of California, Irvine | *Bachelor of Science in Computer Science* | GPA 3.82 September 2021 - June 2024

Relevant Coursework: Design & Analysis of Algorithms, Algorithms for Probabilistic and Deterministic Graphical Models, Machine Learning and Data Mining, System Design, Beyond SQL Data Management, Discrete Mathematics

Work Experience

First American | *Backend Engineer Intern* | *Data Science Intern* June 2024 - Present

- Built a scalable, end-to-end data mining pipeline on **Databricks** with **Pyspark** to generate features for machine learning use cases and transform First American data from silver to gold
- Built AWS-integrated UIs using **Lambda**, **API Gateway**, **S3**, & **Bedrock**, reducing workload per agent by 3 hours
- Spearheaded a machine learning project to predict title order closing dates; extracted and transformed 400k+ orders from **Databricks** using **Spark SQL**, developed models with **Scikit-Learn**, **AWS Sagemaker**, & **Databricks AutoML**
- Integrated feature flags with **LaunchDarkly** on a legacy API with **C#**, **.NET**, and **Microsoft SQL Server**

Digital Learning Lab | *Artificial Intelligence Research Assistant* January 2024 - June 2024

- Collaborated with NSF initiative to develop intelligent writing coach used in pilot study of 100+ engineering students
- Applied **fine-tuning**, **retrieval-augmented generation**, and automated scoring with **OpenAI** and Python

Design and Partnership Lab | *Artificial Intelligence Research Assistant* February 2023 - June 2024

- Collaborated with Chan-Zuckerberg initiative to develop AI dashboard evaluating student performance through LLMs; used **prompt engineering** techniques (e.g. few-shot, chain-of-thought) to assess ~500 responses up to 75% accuracy
- Pioneered a year-long interdisciplinary research project to develop a game-based assessment to assess procrastination; performed game development in **Unity** with **C#** and **Vercel**, data collection on **Firebase** for 100+ participants, data science and predictive modeling with **Scikit-Learn**
- Presented at 8 national conferences (e.g. SCCUR, NCUR) for audiences of 50+ professionals and researchers

Projects

Haven | *UCI VenusHacks' Best Overall & Best Female Empowerment* May 2024

- Developed mobile application to identify safe locations for women through scoring algorithm and user reviews
- Built **React** frontend integrated with **Mapbox** to visualize real-time location data and heatmap of 900k reported crimes

Electrifying Communities through Semantic Segmentation March 2024

- Trained segmentation models (e.g., **UNet++**) on satellite imagery to identify unelectrified settlements in Sub-Saharan Africa, achieving high validation accuracy via **PyTorch Lightning**, **Tensorflow**, and data augmentation techniques
- Built a robust preprocessing and visualization pipeline, including satellite data tiling, sub-tile restitching, and evaluation metrics tracking with **Weights and Biases** for detailed model performance analysis

Mischief in Montreal | *UCI Embark Datathon's Best Overall & People's Choice* April 2023

- Analyzed 250k crime reports from Montreal using data analytics and machine learning to formulate data-driven policies up to 80% confidence that optimize law enforcement resource allocation and improve public safety

Technical Skills

Programming Languages: Python, SQL, C#, C++, Javascript, Typescript, R, HTML, CSS, C

Technologies: Scikit-Learn, Tensorflow, Pytorch, React, React Native, AWS (Sagemaker, Bedrock, Lambda, API Gateway, S3), Expo, Ionic, Angular, Flask, Vercel, Docker, Git, Unity, Weights and Biases

Data Management: Databricks, Firebase, MySQL, PostgreSQL, Snowflake, Cassandra, MongoDB, Couchbase, Neo4J