Donna Pham

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Education

University of Michigan Dec 2024

B.S.E in Computer Science and Computer Engineering, Minor in Statistics; Masters In Aug 2025 *GPA: 3.85*

Coursework: Data Structures and Algorithms(A) • Computer Organization(A) • NLP I(A) • Machine Learning(A) • Distributive Systems (A-) • Computational Theory (A) • Networks (A-) • Advanced Database Management Systems (A) • WebSystems (B) • Software Engineering (B) • Databases and System Design(A)• Game Theory Applications (A) • Advanced Topics in Computer Vision (A) • Artifical Intelligence (A-)

Honors: College of Engineering Industry-Sponsored Scholarship, Dean's list, Intel Scholarship, EECS Scholar

Experience

UNIVERSITY OF MICHIGAN Sept 2023 – Present

Database Researcher *Ann Arbor, MI*

- Led a research project under Professor Lin Ma, focusing on the robustness and explainability of ML-driven database tuning in noisy environments
- Developed benchmarks and methodology to test the resilience of ML-based database knob tuning, increasing throughput by 500 requests/second and reducing variance in noisy environments by 15%
- Implemented and enhanced ETL pipelines for data analytics, reducing data processing times by 25% and streamlining the evaluation process for large-scale datasets using GPU acceleration
- Identified areas for improvement in existing methods, increasing system reliability by 20% through advanced data analytics and prioritization strategies tailored for noisy environments

CITADEL LLC May 2023 – Aug 2023

Data Processing Software Engineer Intern *New York, NY*

- Built and optimized data pipelines using Apache Hadoop and Spark, improving processing efficiency by 30% for faster market data ingestion and analysis
- Managed multi-team pipelines handling 3TB of tick-by-tick market data daily, with automated validation reducing data inaccuracies by 23%
- Implemented real-time streaming with Apache Kafka, processing 500,000 messages per second and reducing market data latency by 12%, enhancing trading algorithm accuracy

TESLA Aug 2022 – May 2023

Vision Software Engineer *Palo Alto, CA*

- Conducted data analysis on 300+ law cases involving self-driving accidents, leveraging machine learning techniques for actionable insights and algorithmic improvements
- Developed 5,000+ lines of C and Unreal Engine 5 code to create autonomous algorithms replicating human car behaviors, utilizing deep learning models for adaptive decision-making
- Optimized in-vehicle communication software, applying AI-driven approaches in C++ and Python, resulting in a significant buffer time reduction and 12% decrease in error biases

NVIDIA May 2022 – Aug 2022

Deep Learning Software Development Intern *Santa Clara, CA*

- Implemented conversational AI algorithms comprising 2000 lines of code to analyze player movements and provide advice. Achieved an accuracy of 83% in predicting player actions
- Enhanced the performance of CUDA-X-AI libraries through debugging and integration of new features, resulting in a remarkable 24% performance boost. Successfully reduced reported bugs by 30%, ensuring the seamless execution of AI tasks across multiple projects
- Utilized TensorFlow, PyTorch, and Scikit-learn to build and fine-tune predictive models for player behavior analysis and game recommendation systems, leading to a 30% increase in player engagements

Technical Skills

Languages: Java, Python (Pytorch, Pandas, NumPy, and Dask), C/C++/C, SQL (Postgres), JavaScript, HTML/CSS, R, MATLAB, Apache Hadoop/Spark/Kafka, Golang

Technologies: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI, Ignition, Git, Jyptyer Notebook, VSCode, Word, Google Workspace, TensorFlow, scikit-learn, or XGBoost, Program management