

Leo Deng

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EDUCATION

Purdue University - GPA: 3.96

Bachelor of Science in Computer Science

West Lafayette, IN

December 2025

- **Relevant Coursework:** Multivariable Algebra, Linear Algebra, Foundations of Computer Science, Programming in C
- **Other Coursework:** John Deere ML Courses: Python-2, Data-2, Stanford ML Course and Project
- **Awards:** USA Coding Olympiad Gold Division, 3rd Place at Hello World Hackathon

EXPERIENCE

Data Mine - Raytheon TRL Model Team

Data Science Researcher

West Lafayette, IN

January 2024– Present

- Created code to train and save BERT model weights based on accuracy; used by entire TDM Raytheon team
- Developed custom focal loss function to fix modal collapse by increasing weights of harder predictions
- Improved model by 20% by integrating synthetic data and displayed results with before and after confusion matrices

Mercury Health - UC San Diego Funded Startup

Machine Learning Engineering Intern

San Diego, CA

April 2022– January 2024

- Implemented confidence sorting and invoke AWS Lambda training function in data labeller, improving labeling efficiency
- Developed an unofficial Ring API in Typescript to create an hls stream to view images for Ring camera systems
- Manipulated training datasets for 8 devices to increase overall accuracy by 30%
- Ambassador to 5 healthcare organizations to ensure customer satisfaction, leading to more onboarded devices and funding
- Created synthetic fall data algorithm to improve unbalanced datasets using AWS Lambda, AWS S3, Postgres

Amazon Web Services

Open Source Contributor Initiative Intern

West Lafayette, IN

September 2023 - December 2023

- OpenSearch Dashboard Repository (1.4k stars) Team to create data visualization tools to automate business intelligence
- Improved pull request workflow, increasing development efficiency and integration for future company contributions
- Presented weekly contributions to Amazon engineers and directors, and guided other team members on specialized issues

Sustainable Computing Laboratory - Notre Dame University

Machine Learning Research Intern

South Bend, IN

June 2022– June 2023

- Helped develop a modified 4D LSTM training model and tune loss algorithm to improve accuracy of dataset by 15%
- Implemented different loss models and tested model over different hyperparameters
- Co-wrote and proofread current research project in predicting liver cancer research

Vitu - Motor Vehicle Software

Software Engineering Intern

Agoura Hills, CA

June 2022 – August 2022

- Developed national API used by car dealers across 50 states that was published to the Vitu Developer Portal
- Validated computer vision text extraction model from Base64.ai against 1000+ vehicle, license and insurance registration
- Presented code and impact to CEO at Vitu Headquarters and mapped future goals for the program

PROJECTS

SpotifySifter : spotifysifter.com

September 2023 - Current

- Full stack web application in React using OAuth2 and Spotify Web API to remove skipped songs from selected playlists
- Hosted application on Railway, connecting Flask backend to Postgres database with AWS RDS and Railway services
- Set up cron to constantly refresh user access tokens and listen to user activity

GitMe (3rd Place at Hello World Hackathon) : devpost.com/software/gitme-amuryi

September 2023

- Developed a GitHub repository summary tool for resume planning with Github and ChatGPT API in React and Python
- Implemented frontend homepage features, routing with React Router, and input to fetch backend endpoint

LEADERSHIP & INVOLVEMENT

Machine Learning @ Purdue Club

Treasurer, Vice President of Finance

West Lafayette, CA

August 2023 - Current

- Managed club finances and company outreach to promote club participation in machine learning projects
- Organizer and overseer of logistics for Purdue's first Startup x AI hackathon with 100+ attendees
- Organized largest attended callout in club history; created many slides and marketing strategies

SKILLS

Programming Languages: Python, C++, C, Java, JavaScript, TypeScript, SQL, Rust, HTML, CSS, SCSS

Technologies: Git, GitHub, BitBucket, React, Flask, PyTorch, TensorFlow, Node.js, AWS Lambda, AWS RDS, Railroad