

Ivy Truong

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EDUCATION

Bryn Mawr College

Expected May 2027

Bachelor of Arts in Computer Science and Mathematics

GPA: 3.96/4.00

- **Coursework:** Systems Programming, Computer Organization, Cloud Computing, Machine Learning
- **Activities:** Girls Who Code College Loop, Rewriting the Code, Break Through Tech ML/AI Fellow

EXPERIENCE

Streamlit

Aug 2025 – Present

Open Source Software Developer

- Designed and implemented a cross-browser number parsing solution that handles space-separated formats consistently across Streamlit components, fixing a critical UX barrier for **1K+ daily users**
- Refactored server-side upload configuration logic to standardize file size limits across features, resolving upload failures for large datasets

AdTrue Software

Jun 2025 – Aug 2025

Software Engineer Intern – Programmatic Out-of-home Advertising Platform

- Engineered a scalable data pipeline in TypeScript that exposes structured datasets via GraphQL, cutting a **6-hour bottleneck** and scaling point-of-interest ingestion from 2K to 10K+ daily for same-day campaign launches
- **Optimized geospatial query performance** by 75% through PostGIS indexing and data partitioning, allowing 3x more campaigns to run across 50+ inventory types without extra infrastructure costs
- Designed an **ad targeting algorithm** using geohash encoding and Haversine distance calculations for sub-second radius queries (100m–5km), improving advertiser returns by 2.5x compared to ZIP-code matching

Develop for Good

Jun 2025 – Aug 2025

Student Software Engineer

- Led a team of 4 to develop a data management dashboard for a nonprofit, integrating a **Spring Boot** backend and React frontend with **lazy loading** to enable bulk editing of 500+ records and reduce initial load time by 60%
- Migrated form workflows from Airtable to **Microsoft SQL Server** with normalized schemas and **Apache Commons** connection pooling, enabling real-time processing of 200+ daily submissions
- Deployed **in-memory caching** with Ehcache for frequently accessed data on **AWS EC2**, increasing system throughput from 150 to 400 requests per second

PROJECTS

SafetyNet (IBM Call for Code Global Challenge) | *Go, Kafka, FastAPI, PyTorch, Hugging Face, PostgreSQL*

- Built a real-time flood forecasting platform in **Go** using **Apache Kafka** to stream weather and SOS data, enabling early risk detection and faster regional rescue coordination
- Trained a **LightGBM ML model** on 3M+ weather records via **Amazon SageMaker** to forecast flood risk with 88% accuracy, reducing emergency response delays by 25% through predictive rescue scheduling
- Designed a **multi-modal classification pipeline** integrating ResNet-50 and BERT to validate SOS reports from images and text, correctly identifying 200+ true emergencies while filtering 80+ false alarms

GigWise (Google Maps Platform Awards) | *React, Node.js, MongoDB, Scikit-learn, Gemini*

- Designed and deployed an AI-powered delivery tracking platform with Google Maps API and React, enabling Uber and Lyft drivers to visualize demand heatmaps and improving route efficiency by 25%
- Built a **ML pipeline** using **Scikit-learn DBSCAN** to cluster MongoDB delivery data stored in **AWS S3**, automatically identifying zones with highest earning potential
- Integrated Google Gemini 2.5 via LangChain to enable conversational querying of delivery data, providing users with actionable insights

LinguaShift | *React Native, Flask, spaCy, RoBERTa, LangChain*

- Developed a mobile messaging app using **Flask** and **React Native** that translates technical jargon for cross-functional teams, reducing miscommunication incidents by 42% across 200+ users
- Fine-tuned a **RoBERTa language model** on 5K+ Slack/email samples for jargon detection, achieving 89% F1-score and integrated it with GPT-4 via LangChain to automatically rewrite messages

TECHNICAL SKILLS

Languages: Python, Go, JavaScript, TypeScript, Java, C/C++, C#, HTML/CSS

Frameworks & Libraries: React, React Native, Flask, FastAPI, Spring Boot, Django, Node.js, Express.js, .NET, PyTorch, Scikit-learn, LangChain

Databases & Tools: AWS (EC2, S3), Apache Kafka, PostgreSQL, MongoDB, GraphQL, Docker, Kubernetes, Firebase, Git