

# Vincent Tran

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## EDUCATION

### University of Oklahoma

*Master's of Science in Computer Science*

Norman, OK

Aug. 2025 – May 2026

### University of Oklahoma

*Bachelor of Science in Computer Science, Minor in Mathematics*

Norman, OK

Aug. 2022 – May 2025

## EXPERIENCE

### ML Graduate Research Assistant

Aug. 2025 – Present

*University of Oklahoma*

*Norman, OK*

- Designed, deployed, and maintained **3 production-grade backend services** using Django, Python, and SQL on AWS to ingest, validate, and enrich structured datasets
- Built **end-to-end data pipelines** generating 50K+ synthetic samples to fine-tune a sequence-to-sequence LLM, improving model generalization
- Implemented authentication, role-based access control, and API contracts to support multi-user workflows
- Wrote **unit and integration tests** to ensure correctness and reliability across data ingestion and endpoints
- Improved system scalability and productivity by **50%** by replacing manual workflows with internal web services

### Software Development Intern

May 2025 – Aug. 2025

*Paycom*

*Oklahoma City, OK*

- Built and deployed a **production recommendation service** using FastAPI, Docker, and Kubernetes, increasing user engagement by **13%**
- Designed and maintained an **end-to-end ETL pipeline** to retrain ML models on fresh data, sustaining a **81% minimum relevance rate**
- Implemented CI/CD pipelines with automated testing and containerized deployments, reducing developer overhead by **2+ hours/week**
- Developed and evaluated ML solutions (scikit-learn, PyTorch) contributing to a data-driven business value report

### Software Undergraduate Research Assistant

May 2023 – May 2025

*University of Oklahoma*

*Norman, OK*

- Developed and maintained a backend analytics service using Python, Django, PostgreSQL, and NLP models, improving processing speed by **25%**
- Designed a **microservice-based backend architecture**, improving scalability and security by **30%**
- Optimized caching and query strategies, reducing API calls by **60%**, runtime by **20%**, and cloud costs by **30%**

### Software Development Intern

May 2024 – Aug. 2024

*Paycom*

*Oklahoma City, OK*

- Designed and implemented a SQL sharding strategy to distribute **100K+ records** and handle traffic spikes
- Deployed a full-stack web application with a React SPA and PHP MVC backend using asynchronous REST APIs
- Collaborated in agile sprints to build a C# backend REST API for an applicant tracking system

## PROJECTS

### wildloop | Python, Django Ninja, PyTorch, PostgreSQL, Nginx, React

Aug. 2025

- Built a **production full-stack platform** for species recognition from user-uploaded images, audio, and video, improving data accessibility by **60%**
- Designed and owned an **end-to-end backend system** supporting real user traffic with authentication and testing
- Deployed ML inference services behind a REST API with Nginx, reducing average prediction latency by **35%**
- Implemented unit and integration tests and decoupled services to enable independent scaling and improve reliability

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, SQL (PostgreSQL, MySQL), JavaScript, Java, C++, PHP, HTML/CSS

**Backend & APIs:** Django, Django Ninja, FastAPI, Flask, Node.js, REST APIs

**Cloud & Infrastructure:** AWS, Docker, Nginx, Firebase, Google Cloud Platform, DigitalOcean, Cloudflare

**Frontend:** React

**Developer Tools:** Git, GitHub, GitLab, CI/CD, Jira, Figma