

Vetriliaa Kumar

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EDUCATION

Bachelor of Science in Computer Science (May 2025) • University of Texas at Dallas

Bachelor of Arts in Economics (May 2025) • University of Texas at Dallas

Programming Languages: Python, JavaScript, C++, Java, Swift, SQL, C#, React, HTML, CSS, TypeScript, REST APIs

AI & Machine Learning: PyTorch, TensorFlow, data structures, algorithms

Backend & Data: Backend services, data pipelines, scalable systems, production infrastructure

DevOps & Cloud: AWS deployment, Docker, Kubernetes, Git, version control systems, CI/CD pipelines

PROJECTS

WeatherGenie - Full Stack Developer | Team of 1

[GitHub](#) | [View Project](#)

- Built full-stack weather application using React with TypeScript, Node.js backend services, and PostgreSQL database with REST APIs and WebSocket real-time updates
- Implemented responsive HTML5/CSS interface with JavaScript interactions, dark/light themes, and mobile-first design achieving cross-platform compatibility
- Engineered type-safe architecture and comprehensive automated testing framework with Drizzle ORM, Zod validation, and TanStack Query for optimized caching, reducing API response times by 60%

AI Ordering Assistant - UI + DevOps Engineer | Team of 3

[GitHub](#) | [View Project](#)

- Architected full stack AI chatbot for In-N-Out using React Native frontend and Python backend with Claude 3.5 Haiku API integration for natural multi-turn conversations
- Deployed production system on AWS cloud infrastructure with MongoDB database, implementing automated testing pipelines and DevOps workflows for continuous integration

College Compass - Fullstack Engineer | Team of 4

[GitHub](#) | [View Project](#)

- Architected end-to-end responsive React web application using JavaScript, HTML, and TypeScript, centralizing transit, dining, and campus resources for international student onboarding
- Deployed via Netlify with automated CI/CD pipeline, implementing NextUI component library for intuitive resource discovery
- Adopted by UTD International Student Services reducing resource discovery time by 40% for 2k+ international students

EXPERIENCE

UT Dallas - Software Engineering Intern | Dallas, TX

August 2024 - June 2025

- Built predictive donor targeting model (**94% accuracy**) implementing troubleshooting and debugging across 13K-record database, **reducing prospect research time by 43%** through end-to-end automation (Python, SQL, Excel)
- Collaborated with development teams to engineer a data pipeline infrastructure with REST APIs supporting real-time analytics for donor prospect research, contributing to successful \$1M funding acquisition (ReNXT, Python, Outlook)

Public Interactives Research Lab - Software Engineering Intern (AR) | Dallas, TX

May 2024-May 2025

- Architected CampusKoi, an AR gaming platform focusing on **real-time systems** performance optimization and scalable system design
- Collaborated in an Agile environment to deploy a **custom backend** architecture enabling real-time bidirectional **data pipelines**, achieving 80% improvement in system response time through **full stack development** (Echo, Unity, C++)
- **Developed computer vision system** implementing end-to-end real-time state management on a mobile AR frontend (OpenCV, C++)

Kesem - Director | Dallas, TX

May 2023 - May 2024

- Spearheaded a 14-member cross-functional team to drive chapter growth through strategic planning and end-to-end campaign development—securing a **record-breaking \$23K in funding** and **grew the volunteer engagement by 250%**

Code for Non-Profit - Co-Founder and Software Engineer | Austin, TX

August 2020 – August 2022

- Founded a 501(c)(3) nonprofit building **scalable, production-ready** mobile apps to nonprofit partners
- Built and launched [Heartbot](#) stress management app with Heartfulness Institute through using **user stories** to define teen-focused features **reaching 3000+ students** nationwide (**Swift, React Native, Firebase, Figma**)
- Developed [Alphabet of the Heart](#), a **daily wellness app** designed with CCARE at Stanford to promote emotional self-regulation (**Swift, Flutter, Figma**)