

# Tanveen Bal

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## EDUCATION

### Georgia Institute of Technology

*M.S. in Computer Science*

*Expected Graduation: December 2026 (Online)*

### University of California, Irvine

*B.S. in Computer Science and Engineering*

*Graduated: March 2025*

*GPA: 3.91 / 4.0*

*Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks, AI/ML, Software Engineering*

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, C++, C, C#, Lua, JavaScript, TypeScript, HTML, CSS, SQL

**Libraries & Frameworks:** Flask, FastAPI, React, Django, Next.js, Node.js, Prisma, Vite, CUDA

**Tools/Technologies:** AWS, Azure, DigitalOcean, Git, Maven, Docker, Vim

**Machine Learning:** TensorFlow, PyTorch, Sci-kit Learn, NumPy, Pandas, OpenCV

## PROFESSIONAL EXPERIENCE

### Siminsights

*January 2025 - May 2025*

*Software Developer Intern | Python, Wordpress, Java, React, Next.js, AWS*

*Irvine, CA*

- Reduced simulation setup time by ~300% by building a prompt-based multi-agent 3D simulation builder
- Improved user support response time by integrating an LLM-powered chatbot into the main site
- Increased site speed and SEO performance by migrating a 10,000+ LOC React app to the Next.js
- Deployed Java and Python backend services to connect LLMs, HyperSkill software, and AWS infrastructure

### Tomorrows AI

*September 2024 - December 2024*

*Software Developer Intern | React, HTML, CSS, Python, Vite, AWS*

*Remote*

- Boosted user engagement by 25% by building a responsive full-stack UI for a European media platform
- Delivered 40% more relevant content by developing a personalized article recommendation system using SVD and user behavior trends, with AWS DynamoDB for storage
- Reduced reading time by 50% by integrating NewsAPI for live news and using AI to summarize articles

## RESEARCH

### Design And Partnership Lab | (Chan Zuckerberg Initiative and AUHSD)

*January 2025 - March 2025*

*Software Development | Python, Typescript, React, HTML/Tailwind CSS, Prisma*

*Irvine, CA*

- Partnered with CZI on an AI-powered student dashboard to evaluate student performance utilizing generative AI
- Worked closely with 7 developers and 3 UI/UX designers to enhance accessibility and improve user engagement
- Built a teacher feedback system by integrating a survey into the dashboard for 1000+ teachers

### Ford Motor Company | Test Track Research Team

*September 2024 - March 2025*

*Software Development | C++, React, Vite, Tensorflow, Flask, OpenCV, Linux*

*Irvine, CA*

- Accomplished real-time object detection in critical scenarios such as kidnappings and Amber Alerts by training a custom YOLO model on Raspberry Pi camera data, improving recognition accuracy
- Optimized target matching by using a cosine similarity model for identifying specific kidnaper vehicles
- Enabled rapid remote deployment by building a React + Fast API web app for live drone video streaming

## PERSONAL PROJECTS

### Leksa | Food Social Media Platform

*React, Express.js, PostgreSQL, Digital Ocean, Node.js*

- Developed a restaurant discovery/social media mobile app for with over 3000 users in orange county
- Engineered restaurant and post recommendation models, deployed on DigitalOcean with Docker for scalability

### AI Minesweeper | Minesweeper Agent

*Python, OpenCV, TensorFlow, PyAutoGUI, Deep-Q Learning*

- Designed an AI-driven Minesweeper player trained on over 300,000 episodes, with ~90% accuracy per tile
- Integrated automated control through PyAutoGUI for gameplay simulation to showcase AI decisions