

Dev Pradeep

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EDUCATION

University at Buffalo

Bachelor of Science in Computer Science

Amherst, NY

Expected May 2027

EXPERIENCE

Software Engineer Intern

University at Buffalo

January 2026 - Present

Buffalo, NY

- Maintaining and scaling an academic TraceTool used in CSE 115 and 116, enabling students to trace code execution and visualize memory state, supporting **500+ students** annually and **5,000+ submissions per semester**.
- Contributing to **system design** for **multi-institution deployment**, improving **concurrency** and **scalability** to reliably handle 5,000+ submissions per semester under peak load.
- Working with course staff to ensure correct and consistent memory modeling and tracing behavior, improving reliability and clarity of the tool as student usage continues to grow.

Software Engineer Intern

Kapsch TrafficCom

May 2025 – August 2025

Duluth, GA

- Engineered **40+ automated end-to-end tests** within a two-week **Agile** release cycle for the DYNAC traffic management platform using **Ranorex** and **Selenium**, reducing manual regression testing effort by **6 hours per release cycle**.
- Built CI/CD pipelines in **GitLab CI** to trigger automated test suites on every commit, **reducing manual QA effort from 4h → 30m** and surfacing **12 defects** before staging.
- Identified and documented **15+ defects** through automated UI and integration tests, improving release stability for a platform deployed across multiple municipal traffic operations centers.

PROJECTS

EDEN | *TypeScript, React, Next.js, YOLO, OpenCV, PyTorch, Mapbox, Twilio, OpenAI*

- Engineered an AI-powered security monitoring system using **YOLO** across **25+ live camera feeds**, detecting incidents (fighting, theft, vandalism) with **accuracy improving from 75% → 92%**
- Built a multi-agent verification system with **pre-trained models and OpenAI** allowing for person tracking and spatial analysis to validate threats
- Integrated real-time video analysis with automated alerting, enabling instant security dispatch via **Twilio** **reducing response time from 30m → 10m**

LovaSlide (HackHarvard 2025) | *Python, TypeScript, Next.js, React, FastAPI, OpenAI API, SerpAPI*

- Developed an AI-powered tool that automatically transforms documents into polished, data-driven presentations highlighting key insights, **cutting slide generation time by 90 percent** compared to Gamma AI and Copilot.
- Implemented a retrieval-augmented fact-verification step that queried **SerpAPI** for live sources and prompted **OpenAI** to cross-check generated slide claims against them, flagging unsupported statements before render.

ORGANIZATIONS

UB Data Analytics

Member

March 2025 – Present

University at Buffalo

- Awarded **1st place out of 16 competing teams (80+ students)** for delivering a data-driven presentation. Analyzed trends and presented findings to a panel of judges
- Discovered insights including correlation between song length and comment activity, and how energy/danceability metrics influenced user engagement and algorithmic visibility.

UB Forge

Director of Partnerships

April 2025 – Present

University at Buffalo

- Collaborating with **100+ developers and founders** in a start-up-like environment, creating impactful projects throughout the semester.
- Networking with over **50+ professional software engineers** and coordinated their participation in UB Forge meetings to share experience and advise students.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, Swift, C, C#, PHP, SQL, HTML/CSS

Frameworks: React, Next.js, Express, FastAPI, Flask, SQLAlchemy, YOLO, Expo

Cloud & Tools: AWS, Google Cloud, Firebase, Docker, GitLab CI, Git, Jest, Selenium, Postman, MySQL, VS Code, Claude Code, Cursor, Codex

Concepts: Data Structures & Algorithms, OOP, REST APIs, CI/CD, Unit & Integration Testing, System Design