Deep Goyal

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EDUCATION

Arizona State University — Phoenix, AZ
Bachelor of Computer Science; GPA: 4.0/4.0 — *Est. May 2026*
Relevant Coursework: *Deep Neural Networks, AI, NLP, Compilers, Algorithm Design and Analysis, Object Orientation*

EXPERIENCE

Arizona State University — Phoenix, AZ
Teaching Assistant - Object Orientation, Data Structures and Algorithms — *Aug 2023 - Present*

- Led 62 teaching assistants to improve lecture quality and student engagement, producing 20+ hours of supplementary videos that reinforced core concepts for 3,000+ students, driving a 15% increase in class average.
- Organized 20+ exam review sessions and workshops, curating YouTube study playlists with 70,000+ views that contributed to an 85% class average on final exams.

Infomaze Technologies — Remote
Software Engineer Intern — *Jun 2024 - Aug 2024*

- Developed a Python-based linear programming model (PuLP) to optimize print scheduling, reducing operational costs by 10% for high-volume printing tasks.
- Integrated SpaCy's Named Entity Recognition (NER) to automate extraction of tasks from natural language requests, achieving 94% accuracy and seamless data pipelining into the optimization model.
- Designed RESTful APIs (Node.js, Express) supporting 1,000+ daily users, enhancing scalability through MongoDB schema optimization and query tuning.
- Reduced page load times by 25% via Redis caching for high-traffic endpoints, improving user experience for 1,000+ concurrent users.

Arizona State University — Phoenix, AZ
Software Engineer — *Jan 2023 - Dec 2023*

- Architected an automated attendance system (Java, TypeScript, Spring Boot, React) for 100,000+ students, integrating custom PCB hardware and HID card scanners with existing university infrastructure.
- Enhanced API reliability by developing automated Postman test suites and unit tests for 20+ endpoints, ensuring robust validation of attendance system functionalities.
- Built responsive UI components (Next.js) for the attendance portal, achieving a 90% satisfaction rate from students and faculty.

PROJECTS

Verbalist.ai - *UC Berkeley Hackathon* — github.com/deep-goyal/verbalist

- Engineered a VS Code extension integrating Llama3 and Whisper AI for voice-driven code editing, enabling real-time voice-to-text conversion with <500ms latency via Groq's inference API.
- Optimized NLP pipelines using NumPy for efficient data handling, reducing voice command processing time by 40%.

Crisis Companion - *Harvard Hackathon* — github.com/deep-goyal/crisis-companion

- Developed a disaster response app (React Native, Flask) generating real-time evacuation routes using Google Maps/Places API and ArcGIS, deployed via Docker for scalable resource management.
- Automated emergency data scraping with Selenium, providing <1-minute updates on shelter availability during crises.

SKILLS

Languages: C, C++, TypeScript, JavaScript, Python, Java, HTML, CSS, Swift
Backend: Node.js, Flask, Express, PostgreSQL, MongoDB, MySQL
Frontend: React, Redux, Next.js, React Native, Tailwind, Figma
DevOps and Tools: Amazon Web Services (AWS), Docker, Jenkins, Git

AWARDS AND RECOGNITION

Outstanding Teaching Assistant of the Year: Recognized for boosting exam averages by 19% through supplemental materials and mentorship (awarded with record-high nominations).
Devils Invent Winner - 2nd Place: Secured $1,000 funding for a university attendance automation prototype.

EXTRACURRICULAR INVOLVEMENT

Software Developers Association: Participated in 15+ workshops and industry panels on emerging tools (e.g., Version Control Systems, Next.js, TensorFlow, Rust).
Linux Users Group: Built and optimized Ubuntu/Fedora VMs to build and test custom linux kernels.