Aashish Dhakal

dhakal.aashish27@gmail.com | aashishdhakal.com | github.com/aadhakal | linkedin.com/in/aashishdhakal

Experience

Junior Software Developer, *C Spire – Telecommunication* | Ridgeland, MS — *July 2024 – Dec 2024*
- Extended full-stack functionalities for customer-facing modules using **Angular and Spring Boot**, serving over 1 million active users
- Identified and corrected **REST API** responses that exposed sensitive customer details by applying **DTO filtering**
- Wrote unit tests with Jasmine, increasing coverage from **65% to 87%** in a large enterprise codebase
- Worked closely with a global team, learning **CI/CD workflows, Git practices, and DevOps tools in an Agile environment**

Software Engineering Intern, *Greenserv Inc. – Medical Waste Management* | Batesville, MS — *May 2023 – Aug 2023*
- Cleaned and merged **100K+ multi-source** CSV records into a master file with **Python**, resolving over 20k inconsistencies
- Built Excel and Matplotlib visualizations to support route optimization analysis, helping the team project **$130K in annual savings**
- Assisted in migrating data to **Azure SQL** by designing schemas and writing SQL queries

Undergraduate Researcher, *Sally McDonnell Barksdale Honors College, Honors Thesis* | Oxford, MS — *May 2024 – April 2025*
- Designed, simulated, and evaluated a UAV–UGV system for autonomous delivery, using **ROS and ArduPilot SITL with Gazebo**
- Implemented flight-planning algorithms using **OpenCV** for localization and precision landing
- Collaborated with hardware engineers to integrate **embedded systems** and support research validation through field testing
- Published findings in the **Ole Miss eGrove Repository** and competed in Raytheon Autonomous Vehicle Competition

Teaching Assistant - DSA, *University of Mississippi* | Oxford, MS — *Aug 2023 – May 2025*
- Mentored **over 70 students** in data structures and algorithms through labs and office hours, and helped redesign lab materials, contributing to a **1.5-grade average improvement** across supported sections

Projects

NavAlone, AI Companion Platform, *HackHarvard 2023* | Cambridge, MA — *Oct 2023* **[View Code] [Devpost]**
- Built an AI platform to help seniors and dementia patients connect with lifelike AI clones of loved ones via text and voice
- Integrated **OpenAI LLMs, Pinecone vector storage, and Twilio**, with custom **prompt engineering** and **RAG pipelines**
- Awarded **First Time Hack Award** among **200+ projects and 650+ participants**

CodeReview AI, *Independent Project* | Oxford, MS — *May 2025 – Present* **[View Code]**
- Develop a full-stack AI code review platform using **FastAPI, React, and LLaMA2-7B (Ollama)** to detect bugs, flag complexity issues, perform static security checks based on OWASP guidelines, and auto-generate documentation
- Design RESTful endpoints and a dashboard to visualize industry-standard static analysis metrics and instant code health summaries

Deep Learning Models, *Independent Study* | Oxford, MS — *Jan 2025 – Present* **[View Code]**
- Implement **CNNs, Transformers, VAEs, and RNNs** from scratch to learn how model architectures and gradients work during training
- Train models in **PyTorch** and visualize internal representations and training metrics to analyze performance using **Matplotlib**

HeatSync Embedded Smart Thermostat, *Manufacturing Capstone Project* | Oxford, MS — *Dec 2023 – Dec 2024* **[View Code]**
- Built a fully functional embedded thermostat on Raspberry Pi from scratch with a **Kivy UI**, touchscreen, and **sensor integrations**
- Led market research, cost analysis, and product pitching to deliver a complete business case and working prototype

Skills

Programming: Python, Java (Spring Boot), TypeScript/JavaScript (Angular/React), SQL, HTML/CSS
Cloud & DevOps: AWS (S3, ECS, EC2), Terraform (learning), CI/CD pipelines, Docker, Google Cloud Platform (GCP), Azure (some)
Databases: MySQL, NoSQL (learning), Elasticsearch (exposure), MongoDB (exposure)
AI & Dev Tools: TensorFlow, PyTorch, OpenCV, GitHub Copilot, Cursor, Claude, OpenAI, Hugging Face
Dev Practices: Git, REST API design, Agile Methodologies, Jira, SDLC, API security

Leadership Experience

Co-Founder & Director, *HackBeta* — *Oct 2023 – April 2025*
- Initiated and led the **university's first-ever hackathon**, collaborating with faculty, sponsors, and a **7-member team** to deliver two successful events with strong student engagement
- Managed recruitment, event planning, and website design, establishing faculty support and processes to sustain the hackathon as an **annual university tradition**

President, *Coding Club* — *Aug 2024 – May 2025*
- Led weekly technical workshops and mock interviews in a **30-member club**, covering **best software engineering practices, design trade-offs, and technical interview preparation**

Education

3.82/4.0 **Bachelor of Science in Computer Science**, *University of Mississippi* | Oxford, MS — *Aug 2021 – May 25*
Minors: Mathematics and Manufacturing Engineering (Interdisciplinary Product Development Focus)
Achievements: University Hall of Fame (<0.2% selected annually for leadership, achievement, and service), Who's Who Inductee
Affiliations: CodePath(TIP 102 & 103, Web103), Association for Computing Machinery(ACM) member