

Vaibhav Hawaldar

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EDUCATION

North Carolina State University , Raleigh, NC, USA <i>Master of Science in Computer Science</i>	Aug 2024 – May 2026 GPA: 4.0/4.0
Coursework: Machine Learning, Neural Networks, Parallel Algorithms, Software Engineering, Object-Oriented Design and Development, Data Analysis and Algorithms, IoT Analytics, Computer Networks, Biometrics	
NMIMS University, Mukesh Patel School of Technology Management , Mumbai, India <i>Bachelor of Technology in Computer Engineering</i>	Aug 2020 – May 2024 GPA: 3.76/4.0
Coursework: Artificial Intelligence, Operating Systems, Data Structures and Algorithms, Database Management Systems	

WORK EXPERIENCE

Software Engineering Intern, Ribbon Communications , Raleigh, USA	July 2025 – Present
• Contributed to real-time communication software, enhancing SIP call processing, WebRTC, and TCP/IP networking	
• Diagnosed automated and resolved production issues in Linux/UNIX environments using log, traces, and shell scripts	
• Integrated C/C++ networking libraries with gRPC and RESTful APIs to deliver high-performance distributed systems	
• Integrated workflows using Makefiles and Git-based CI/CD pipelines to ensure smooth feature delivery and bug resolution.	
Data Analyst, NC State University	May 2025 – Present
• Cleaned and analyzed institutional data to support library analytics and reporting.	
• Built interactive Datawrapper dashboards for accurate public and internal library statistics.	
• Enhanced NC State Libraries website using PHP and Drupal improvements.	
Research Assistant, NC State University	May 2025 – July 2025
• Designed and analyzed multi-institutional datasets for early student success prediction using statistical techniques	
• Evaluated feature–performance relationships, identifying variability of predictive features across datasets	
• Co-authored “ <i>A Study of Early Student Success Prediction using Programming Log Data</i> ” (under review at SIGCSE).	
Machine Learning Intern, FutureTayari , Mumbai, India	Dec 2023 – Jun 2024
• Enhanced user engagement by 50% with gamified card quiz using LLM for automated content creation	
• Developed React-based front-end with Chakra UI and Framer Motion on a Firebase NoSQL backend	
• Automated deployments via a CI/CD pipeline with GitHub and Vercel, improving release speed and reliability	

PROJECTS

HealthSync Full Stack Development (React, Python, Firebase, Nextjs, HTML, CSS, LLM, AI)	
• Developed a Next.js-based health portal an admin dashboard with ChartJs libraries, and a responsive UI using Tailwind	
• Integrated OpenAI & LLM for automated medical report analysis and used NoSQL Firebase for backend	
• Implemented CI/CD workflows via GitHub Actions and Vercel, reducing report processing time by 30%	
PySpark ETL Pipeline Python, Big Data, AWS, and Cloud Computing	
• Implemented an ETL pipeline using PySpark to extract data from MS SQL Server and load it into an AWS S3	
• Containerized the pipeline using Docker and automated infrastructure provisioning and data workflows with Terraform	
Plant Disease Detection using YOLO Machine Learning, Image Processing, Computer Vision (Python, Yolo, Flask)	
• Established a plant disease detection system using SVM, Random Forest, and YOLOv5 and flask for model deployment	
• Transitioned to YOLOv8 to reduce training time by 30% using custom annotated dataset to enhance accuracy by 60%	
• Co-authored a research paper currently under peer review: “ Revolutionizing Plant Disease Detection in Agriculture ”	

TECHNICAL SKILLS

Programming Languages: Python, HTML, CSS, C, C++, Java, TypeScript, PHP, SQL, Swift
Frameworks/Libraries: NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, OpenCV, React.js, Next.js, Flask, Node.js
Databases & Cloud: MySQL, PostgreSQL, MongoDB, AWS (incl. Boto3), Azure, Docker, Kubernetes, Spark
Tools: Distributed Systems, Tensorflow, PyTorch, Jupyter , Git, CI/CD, Linux/UNIX, Flask, Macos, Xcode
Skills: Web Development, Object Oriented Programming, Deep Learning, Machine Learning, NLP, Computer Vision, grep
Achievements: Finalist – Amazon ML Summer School (Top 0.1%), HackerRank – 5-star problem solver