

Ushalatha Nithyananda Kundar

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Education

University of North Carolina at Charlotte, MS in Computer Science Aug 2024 – Dec 2025
Concentration: Software Systems and Networks GPA: 3.71
Coursework: Software System Design and Implementation, Data Structures and Algorithms, Cloud Computing for data analytics, Network based application development, Artificial Intelligence, Network security, Software Engineering

Technologies

Languages: Proficient in modern programming languages like Java, Python, and C++; R, SQL, MySQL, PostgreSQL, NoSQL, MongoDB, Cassandra, DynamoDB, Oracle, HTML, CSS, JavaScript, TypeScript
Full-Stack and Software Development: Node.js, React.js, Angular, Redux, RxJS, Flux, Webpack, Jest, D3.js, Spring Boot, Agile/Scrum, CI/CD, Unit Testing, Integration Testing, Database Administration, Database Design, Debugging, Troubleshooting, Code Reviews, Version Control
API and Backend Development: RESTful APIs, Postman, API Gateway, Microservices, GraphQL, Back-End Web Development
Cloud and DevOps: AWS (Lambda, DynamoDB, S3, CloudWatch, SES, API Gateway, EC2), Microsoft Azure, Docker, Kubernetes, GitHub, Git, JIRA, CI/CD Pipelines, Terraform, Jenkins, Talend, Unix/Linux, System Administration
Visualization and UI/UX: Tableau, Power BI, Matplotlib, Seaborn, Figma, User Interface Design, WCAG Accessibility, Design
Statistical Analysis: SPSS, SAS, Statistical Modeling, Mathematical Optimization, Data Analysis
Data Analytics and Machine Learning: Pandas, NumPy, scikit-learn, TensorFlow, Keras, PyTorch, Hadoop, Spark, Hive, Machine Learning, Deep Learning, Neural Networks, Computer Vision, NLP
Interpersonal: Communication, Cross-Functional Collaboration, Teamwork, Leadership, Agile Project Management

Experience

UNC Charlotte Jan 2025 - Present
Graduate Teaching Assistant — Java, Node.js, React, Angular, D3.js, Docker, JavaScript

- Architected and deployed a scalable full-stack web application using Node.js, React, and MongoDB with JWT authentication, dynamic D3.js visualizations, and WCAG-compliant UI design, supporting 50+ students.
- Configured NGINX/Apache for scalable hosting; implemented secure RESTful APIs with CORS configuration, database integration, and encrypted data handling, reducing response time by 30%.
- Conducted code reviews and maintained version control workflows using GitHub; instructed 50+ students on best practices for dynamic charting libraries, asynchronous data retrieval, and modular architecture

Finnacle (Internship) June 2023 - Dec 2023
Cloud Engineer Intern | Tech Stack: AWS (Lambda, API Gateway, DynamoDB, SES, CloudWatch, S3), Node.js, JavaScript

- Developed scalable serverless event monitoring system using AWS Lambda, API Gateway, and DynamoDB, improving service uptime by 25% and query performance by 40% through troubleshooting and optimization
- Automated and maintained email alerts and health monitoring via AWS SES and CloudWatch, increasing detection accuracy by 30% and reducing manual tasks by 35%.
- Collaborated in Agile/Scrum teams to optimize CI/CD pipelines, perform code reviews, and implement best practices for scalable serverless releases

Projects

Plant Health App | *Java, Firebase, Android Studio, Keras, TensorFlow, Deep Learning, Computer Vision*

- Designed and deployed a deep learning model for plant disease identification using CNNs and computer vision, achieving 92% classification accuracy on 10K+ images, and integrated it into an Android app with intuitive UI design

Serverless Event Reminder Application | *AWS (Lambda, API Gateway, DynamoDB, SES, CloudWatch, S3), Node.js*

- Engineered a serverless reminder system using AWS Lambda and DynamoDB to automate email notifications, improving scalability by 40% and reducing costs by 35% via infrastructure-as-code

Full-Stack Web Application: University News Dashboard | *JavaScript, React, D3.js, Node.js, MongoDB, RESTful APIs, NGINX*

- Developed scalable full-stack SPA with React, Node.js, and MongoDB for real-time news streams, featuring JWT authentication, D3.js visualizations, accessible design, and NGINX load balancing for 99.5% uptime

Publications

Plant Health App: A Tool for Plant Enthusiasts Nov 2024
[Publication: ieeexplore.ieee.org/document/10750554](https://ieeexplore.ieee.org/document/10750554)

Certifications

Introduction to Artificial Intelligence, IBM Certified Sep 2025
Introduction to Cybersecurity Tools and Cyber Attacks, IBM Certified Oct 2024
AWS Cloud Practitioner Essentials, AWS Aug 2025

Achievement

Winner of Redbus Hackathon at NMAMIT for designing and developing a full-stack application, demonstrating strong teamwork, problem-solving, and agile software development skills.