BALAKRISHNA NAIR NALIVALAPIL

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EDUCATION

University of Maryland, College Park   *May 2026 (Exp.)*
Master of Engineering - Software Engineering

Indian Institute of Information Technology, Sri City   *Aug 2018 - May 2022*
Bachelor of Technology - Electronics and Communications Engineering

SKILLS

- Programming- Python, Java, JavaScript, SQL
- Frameworks & Libraries- IIB toolkit, Spring Boot, ReactJS, Django, Node.js, Next.js
- Tools- Github, Atlassian Suite, Jenkins, JFrog, IIB & WebSphere MQ, AWS, PostgreSQL
- Data Analysis/Visualization- Power BI, Pandas, NumPy, Matplotlib

WORK EXPERIENCE

Capgemini Technology Services – Senior Software Engineer

Oct 2022 - Sep 2024

Role - *IIB Developer, Chennai*

- Developed 20+ **integration** solutions for MUFG Banking using IBM Integration Bus Toolkit, enabling seamless data transmission across **core banking systems** with WebSphere **MQ**, ensuring accuracy for $100M+ in transactions.
- Composed well-structured code, debugged systems, and optimized workflows using **Agile** methodologies, reducing post-deployment errors by 25% through comprehensive testing and issue resolution.
- **Documented** coding standards and project workflows, cutting integration time by 15% and enhancing code maintainability
- **Automated** CI/CD pipelines and Leveraged Atlassian suite to enhance team productivity and cutting deployment time by 30%

ACADEMIC PROJECTS

ClassNest - (LMS) *University of Maryland* - https://classnest.up.railway.app/

Sept 2024 - Nov 2024

- Led development of a scalable LMS leveraging Django MVT architecture, PostgreSQL, and modern frontend technologies, enhancing security and user experience through role-based access control
- Engineered AI-driven quiz generation using Groq API and Llama3 LLM, automating PDF-to-quiz workflows to enhance educator efficiency. Deployed the application via CI/CD with >90% test coverage, collaborating in an agile environment.

GitHub Issue Analysis - Poetry open-source project

Sept 2024 - Nov 2024

- Analyzed contributor engagement and project responsiveness for the Poetry open-source project using Python, pandas, and matplotlib, revealing diverse engagement patterns and identifying response outliers through visualization
- Enhanced reliability by developing unit tests and automating data workflows mock testing, presenting actionable insights

Apartment Security Management System

Oct 2022 – Nov 2022

- Developed a role-based web application for apartment security management, including user, delivery, and alert systems.
- Implemented using React, Spring Boot, and PostgreSQL, with a focus on efficient data management and user interface design

IoT based Smart Health Monitoring System

Feb 2021 - Nov 2021

Team Lead – Under guidance of Dr. Paul Braineard – IIIT Sri City

- Developed an IoT-based system using Arduino and Raspberry Pi to remotely monitor patient vital signs in real-time, enables doctors to make informed decisions with a 20% faster response time
- Integrated various hardware sensors and a Python-based web application to provide doctors with comprehensive health status updates for remote patients

Real-Time Energy and Water Consumption Monitoring System

Aug 2019 - Nov 2019

- Engineered a user-friendly web application with Django, enabling intuitive tracking and visualization of consumption patterns, leading to informed decision-making for efficient resource management.

CERTIFICATIONS: Java Full Stack with React, HTML, CSS, and JavaScript for Web Developers, IBM Integration Bus v10 Application Development, Foundations: Data, Data, everywhere – Google, Jenkins: Automating your delivery pipeline

EVIDENCE OF EXCELLENCE: Innovative software engineer with a proven track record in developing scalable data pipelines, optimizing cloud infrastructure, and building high-performance full-stack applications