Nihal Rian Dias

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Experience

Potters Maps **Jul 2023 – Present**

Software Engineer

- **Led full-stack development and architecture** of enterprise-scale mapping and logistics platforms, delivering performant, secure, and feature-rich applications used in production by B2B clients.
- **Engineered advanced geospatial and AI-driven systems** enabling real-time route planning, spatial data exploration, clustering, live tracking, and analytical visualization across high-volume datasets.
- **Designed and scaled microservice-based APIs** for routing, geocoding, and imagery workflows, standardizing authentication, rate-limiting, and cross-service documentation under unified CI/CD pipelines.
- **Automated large-scale spatial data workflows**, transforming and validating tens of millions of POI records through optimized pipelines for ingestion, quality assurance, and checksum verification.
- **Drove cross-functional excellence** by mentoring engineers, reviewing code, and collaborating with clients and product stakeholders to align technical solutions with operational goals and customer needs.

Volvo Group **Feb 2023 – Jul 2023**

Software Engineering Intern Bangalore, India

- Modernized legacy web applications and migrated them to **microservices-based cloud architecture**.
- Tech: **React.js, .NET, Azure RedHat OpenShift, JavaScript, C#**.

Groupot **Jun 2022 – Dec 2022**

Software Development Engineering Intern Bangalore, India

- Worked on the **full stack web & mobile development** of Savesmart, a digital gold savings platform.
- Tech: **AWS, Node.js, GraphQL, PostgreSQL, CypherQL, Neo4j, React.js, React Native**.

Education

Manipal Institute of Technology **2019 – 2023**

B.Tech in Computer and Communication Engineering (Minor: Big Data Analytics) CGPA: 8.11/10

Technical Skills

- **Languages:** JavaScript, TypeScript, Python, Dart, Java, C#, C++, C, Rust, Go, PHP
- **Frameworks:** React.js, Next.js, Node.js, FastAPI, Flask, .NET, Flutter, React Native, Axum, Laravel
- **Data/Cloud:** AWS, Azure, GCP, PostgreSQL, PostGIS, MongoDB, Firebase, Redis, RabbitMQ, GraphQL, Neo4j, CypherQL, SQL, Spark, Kafka, Hadoop, Django.
- **Libraries/Tools:** Docker, Kubernetes, TensorFlow, Pandas, ArgoCD, Helm, Mapbox, Leaflet, ShadCN UI, Tailwind, Chakra UI, Three.js, Git, Linux.

Projects

- **Maponomy** : B2B SaaS for logistics companies offering **route optimization, fleet management, and analytics**.
  Tech: **AWS, Next.js, ShadCN UI, Leaflet, Tailwind, FastAPI, PostgreSQL, PostGIS, TypeScript, Python**
- **Maphoria** : **Geospatial intelligence assistant** helping users explore the world around them.
  Tech: **AWS, Next.js, FastAPI, Pandas, Ollama, PostgreSQL, PostGIS, Mapbox, ShadCN UI, Tailwind, TypeScript, Python**
- **Bumigram** : B2C platform for collecting or purchasing **street-level imagery** for mapping and analytics.
  Tech: **AWS, React.js, Mapbox, Node.js, Chakra UI, PostgreSQL, PostGIS, TypeScript**

Research / Publications

Grow-IoT: Smart analytics app for plant health analysis and remote farm monitoring with sensors. Presented at AICECS 2021 and published in the **IOP Journal**

Volunteer Experience

Co-authored the Microsoft Learn module,**"Language Understanding in Azure Health Bot"**, used by Microsoft as part of student training programs, empowering thousands of students worldwide.