ANSHUMAN NAYAK

Software Engineer
anshuman_n@outlook.com | +91 9337928411 | Hyderabad, IN
Linkedin | **GitHub** | **Portfolio** | **Blog**

Education

IIT Kharagpur — Kharagpur, India
Master of Technology Agricultural Systems and Management — July 2020 - May 2022
CGPA: 9.51

Orissa University of Agriculture and Technology — Bhubaneswar, India
Bachelor of Technology Agricultural Engineering — July 2016 - July 2020
CGPA: 8.50

Experience

Carelon Global Solutions LLP | Software Engineer — Gurugram, India | Jul 2022 - Feb 2024

- Led low-code platform creation for Data API Gateway.
- Cut dev time from 14 days to 2 hours with templates.
- Engineered fault-tolerant core, enabling scalability.
- Supported 2000+ data scientists, 5+ apps.
- Managed diverse data model lifecycle.
- Implemented effective alerts and led model pipelines.

NexVerse Pvt. Ltd. | Fullstack Developer — Bhubaneswar, India | Jan 2019 - Mar 2022

- Developed Cordova-based hybrid social media app UI.
- Leveraged Node.js for server-side development and MongoDB as the primary data storage solution.
- Integrated Push Notifications, InApp Messaging, A/B Testing, Analytics.
- Optimized video processing for superior user experience.
- Supported 8000+ users and 15+ businesses.
- Implemented AWS EC2 autoscaling.

Zeno Health (Workcell Solutions) | Software Engineer II — Remote | Feb 2024 - Present

- Engineered and managed high-performance payment gateway processing 15,000+ transactions daily.
- Designed and optimized ETL pipelines for monthly migration of 10+ billion records.
- Developed and integrated web scraping solutions to build extensive eCommerce database.
- Led and motivated 10-person development team to achieve critical business objectives.
- Implemented and scaled NLP and GPT-4 powered chatbots handling 1M+ customer inquiries.

Skills

Programming Languages:	Python, JavaScript, C, Go
Libraries/Frameworks:	Node JS, Express, React, Next Js, Typescript, Django, Flask, GraphQL, REST API, OpenCV, Tensorflow, HTML5, CSS3
Tools / Platforms:	AWS, Docker, Git, Jira, NgInx, GPTs, GitHub-CoPilot, Cursor
Databases:	MySQL, MongoDB, Firebase, PostgreSQL, Snowflake

Projects / Open-Source

Graph CMS — *TypeScript, Jest, Next JS, GraphQL, REST, NoSQL, SQL*

Features:

- Seamlessly integrates with SQL or NoSQL data sources without explicit coding.
- Drastically reduces backend development efforts, enabling a focus on strategic tasks.
- Generates high-quality, maintainable code for complex backends.
- Offers GraphQL and REST interfaces for versatile integration.
- Employs Next JS for a fast, scalable, and user-friendly frontend.

Deployment Options:

- Deploys as a monolith or microservice based on project needs.
- Supports middleware-based implementations for customization.

Benefits:

- Developers deliver projects faster with minimal code.
- Reduces backend development time and associated costs.
- Easily scales to meet growing business demands.
- Ensures well-structured, easily extendable code.
- Flexible deployment options and middleware support.

Mobile camera based plant diesease detector | Link *JavaScript, Python, WebAssembly*

- Produced an app for identifying plant diseases via photos.
- Designed for online/offline use, especially advantageous for Indian farmers.
- Employed TensorFlow.js and OpenCV.js for Deep Learning.
- Established Flask/Python ML pipeline for hosting and updates.
- Constructed UI with Ionic and React JS.
- Idea published in Elsevier's Smart Agricultural Technology Journal.

Next Generation Sports Battle *Cordova, NodeJS, MongoDB*

- Created an app connecting sports enthusiasts for challenges.
- Cordova with WebRTC powers frontend; Node.js, Express, GraphQL backend.
- Real-time data via GraphQL subscriptions.
- Utilized RethinkDB and MongoDB for dynamic and static data.
- Successfully tested with 20,000 users in 2019.
- Hosted on AWS-OCP for seamless performance.

SpectraML | Link *Django, HTML, JavaScript*

Developed an open-source AutoML platform for spectroscopic data, automating preprocessing, model selection, and evaluation.

Built interactive visualizations (PCA, t-SNE, spectral overlays) to support model interpretability and data exploration.

Implemented domain-specific signal processing (e.g., smoothing, baseline correction) to improve model robustness.

Designed a full-stack web app (Python backend, Plotly/D3.js frontend) for real-time experimentation and analysis.

Enabled reproducible research via Jupyter notebooks, modular pipelines, and configurable workflows.

Open-sourced with documentation and community guidelines to support extensibility and academic collaboration.

Certifications

- Data Analytics with Python - **NPTEL**
- Responsive Web Design - **FreeCodeCamp**
- GraphQL Developer - Associate - **Apollo**
- JavaScript Algorithms and Data Structures - **FreeCodeCamp**
- Programming in Python - **Coursera**
- SQL Databases - **Coursera**
- Django Web Framework - **Coursera**
- GIS and Its application with Python - NAHEP.
- Financial And Social Inclusion - **University of waikato**
- Meta Back-End Developer - **META**

Honors & Awards

- Achieved Silver Elite Award in Data Analytics from IIT Roorkee.
- Recognized Scholar in Digital Agricultural Technology by GSA, Kyoto Japan.
- Attained All India Rank 67 in GATE 2020.

- Holds patent for smartphone tech detecting Nitrate and Phosphate in water and soil.
- Scientific Publication 1 - A Smartphone-Enabled Imaging Device for Chromotropic Acid-Based Measurement of Nitrate in Soil Samples
- Scientific Publication 2 - A smartphone-integrated imaging device for measuring nitrate and phosphate in soil and water samples
- Scientific Publication 3 - Application of smartphone-image processing and transfer learning for rice disease and nutrient deficiency detection
- Scientific Publication 4 - Digital soil mapping of available phosphorus using a smartphone-integrated RGB imaging device and ascorbic acid extraction method