

Nitin Tony Paul

Software Development | Computer Science

Education

Govt. Model Engineering College

Kochi, Kerala

B.Tech in Computer Science and Business Systems

09/2024 - 04/2028 (Expected)

Bhavan's Vidya Mandir

Girinagar, Kerala

High School Diploma

09/2010 - 07/2023

Experience

National Student Data Corps (NSDC) - Model Engineering College Chapter

An initiative of the NSF-funded Northeast Big Data Innovation Hub at Columbia University

Web Sublead

04/2025 - Present

- Responsible for the content management and ongoing updates of the official chapter website, ensuring it serves as a reliable platform for event announcements and member information.

Executive

10/2024 - 04/2025

- Contributed to strategic planning and ideation for chapter programs, helping to define concepts for data science workshops and member engagement events.

Projects

NUMA - Open-Source Productivity Dashboard | [GitHub](#)

JavaScript, CSS, HTML, Chrome Extensions API, REST APIs

- Managed the end-to-end product lifecycle of NUMA, an open-source productivity-focused Chrome extension, from initial concept and development to launching a dedicated landing page and publishing on Gumroad.
- Engineered the core application in vanilla JavaScript, implementing features like a dynamic to-do list and customizable quick links with persistent state managed efficiently via local storage.
- Developed the responsive marketing landing page to drive user acquisition and clearly communicate the product's value proposition, leading to its public distribution.

High-Performance C++/Python Data Pipeline | [GitHub](#)

C++, Python, Scipy, yfinance

- Designed and built a hybrid C++/Python simulation and optimization pipeline with modular architecture, integrating high-performance compute modules with Python orchestration for large-scale analytics.
- Implemented a custom EGARCH estimation engine and Monte Carlo simulation module in C++, implementing complex numerical optimization algorithms from scratch, including iterative solvers and step-size control, to improve runtime performance.
- Automated data ingestion, cross-language integration, and portfolio optimization in Python using yfinance and scipy, delivering a reproducible, extensible system deployed on GitHub.

Community Engagement Discord Bot | [GitHub](#)

Python, discord.py, REST APIs

- Took initiative to solve a community engagement problem by developing a Python Discord bot, managing its deployment to a cloud platform (Replit) and implementing a keep-alive service to ensure continuous uptime during its operational period.

Skills

Programming Languages: Python, JavaScript, C++, SQL, HTML/CSS, Java, C

Libraries & Frameworks: NumPy, Pandas, Scipy, Scikit-learn, TensorFlow, discord.py, GSAP

Developer Tools: Git, GitHub, REST APIs, VS Code

Languages: English, Malayalam