

Nitin Tony Paul

Computer Science Student

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Education

Govt. Model Engineering College

B.Tech in Computer Science and Business Systems

Kochi, Kerala

09/2024 - 04/2028

Bhavan's Vidya Mandir

High School Diploma

Girinagar, Kerala

09/2010 - 07/2023

Experience

Web Sublead

NSDC MEC

04/2025 - Present

- Developing and Maintaining official NSDC MEC websites along with building webpages for events associated with the organisation.

Executive

NSDC MEC

10/2024 - 04/2025

- Assisted NSDC in collaborating, managing and brainstorming events, contests and more

Projects

EGARCH-JDM Based Portfolio Optimizer (MVO) | [LINK](#)

- Developed a portfolio optimization framework integrating EGARCH and Merton Jump Diffusion models for risk-adjusted asset allocation.
- Engineered a custom C++ EGARCH implementation using Conjugate Gradient optimization, showcasing deep knowledge of asymmetric volatility modeling.
- Applied Mean-Variance Optimization techniques to allocate capital efficiently under complex stochastic volatility and jump dynamics.

GARCH(1,1) Volatility Estimation with Gradient Ascent | [LINK](#)

- Developed a custom C++ implementation of the GARCH(1,1) model for financial volatility estimation.
- Utilized Maximum Likelihood Estimation with Gradient Ascent optimization, demonstrating strong grasp of time series modeling and numerical methods.

NUMA - Customizable Productivity Chrome Extension | [LINK](#)

- Built NUMA, a Chrome new-tab productivity extension offering features like quick links, mini to-do list, time-based greetings, daily quotes/facts, and theme switching — all in a sleek, minimal UI.
- Engineered using HTML, CSS, and vanilla JavaScript, with seamless onboarding, localStorage data persistence, and third-party API integration (ZenQuotes, Useless Facts).
- Deployed on Gumroad for public access, with roadmap goals including Chrome Web Store launch, feature expansions, and cross-browser support.

Discord Bot for Classroom Coordination | [LINK](#)

- Developed a lightweight and efficient Discord bot for my private class server during the COVID-19 lockdown period (2021-2022) designed to assist with classroom coordination and engagement

Skills

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

Tools and Frameworks: GitHub, TensorFlow, NumPy, Scikit-learn, GSAP, Blender

Languages: English, Malayalam