Mohammed Rayaan Pasha

Full-Stack Developer & Algorithm Specialist | 10+ Scalable Projects (1K+ Users) | 2 Published Papers

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WORK EXPERIENCE

Royal & Co

Full Stack Developer Intern   Dec 2024 - Jan 2025

- **Boosted MySQL query performance by 50%** through schema redesign, sharding, and load balancing, enabling faster data access for company ratings analysis.
- **Automated billing workflows with Node.js & MERN stack,** slashing manual processing by 30+ hours/month and enhancing internal operational efficiency.
- **Developed secure RESTful APIs (Express.js, JWT)** for sharded database access, simplifying data queries and fortifying system security.
- **Engineered secure and streamlined data access APIs (Express.js, JWT, Node.js)** for sharded databases, enhancing query speed, simplifying data retrieval, and fortifying system security for internal tools.

EDUCATION

St. Joseph's University

Bachelors of Computer Applications   June 2024 - June 2027

PROJECTS

Quantiva – AI-Powered Market Sentiment & Stock Analysis ↗

- Automated **sentiment analysis for Reddit posts**, enabling retail traders to track market trends without manual research.
- Integrated **Yahoo Finance API**, processing real-time stock data with **99% uptime**, ensuring seamless financial insights.
- Engineered an **AI-driven correlation model**, improving stock sentiment prediction accuracy by **30%** over baseline heuristics.
- Designed **interactive data visualizations**, reducing time spent on market analysis by **40%** for users.

Combinatorial Gradient Descent Algorithm for Exo-Planet Habitability Prediction. ↗

- **Predicted habitability** with **88% accuracy** across **10,000+ exoplanets**, reducing analysis time by **40%** using combinatorial gradient descent.
- **Simulated 1M+ exoplanets**, identifying **500,000+ habitable planets** through advanced feature modeling and interaction analysis.
- **Presented at 2 conferences**, collaborating with **astrobiology researchers** to refine models for **cosmological mission** applications.

SKILLS

- Languages: Python, JavaScript, C, C++, Java, PHP, R, SQL
- Frameworks & Tools: React.js, Node.js, Express.js, MongoDB, Git, REST APIs, Linux
- Databases: MySQL, MongoDB
- Core Skills: Full-Stack Development, Algorithms, Optimization, Data Structures, Database Management, Automation

AWARDS

First Place - National Level API Hackathon –   Christ University

First Place - State Level Coding Event New Horizon College

First Place - State Level Paper Presentation New Horizon College