

# SHAHIL GUPTA | 21ME3FP06



# MECHANICAL ENGINEERING/FINANCIAL ENGINEERING MICRO SPL. in ARTIFICIAL INTELLIGENCE AND APPLICATIONS

EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2025	M.TECH Dual Degree 5Y	IIT Kharagpur	8.45 / 10
2021	Central Board of Secondary Education	Divine Public School	87.00%
2019	Central Board of Secondary Education	Vivekananda Central School	94.60%
WORK EXPERIENCES			

#### Founder | ScholarSphere, IIT Kharagpur

[Mar 2024 - Present]

Overview: Founded ScholarSphere to facilitate access for viewers to research intern opportunities through streamlined data organization

- Developed a website using **Supabase** and **Django framework** to provide access to Research intern opportunities, reaching **20k+** viewers
- Compiled detailed profile data of over 1600 professors by implementing web scraping techniques with BeautifulSoup4 and Selenium
- Structured data into a searchable format with filters for 50+ universities & 100+ research areas, enabling easy access to professors' profile

#### Research Consultant | WorldQuant, Delhi

[Feb 2024 - Present]

- **Overview:** Constructed, backtested, and optimized over 20 quantitative trading alpha expressions using historical stock market information
- Engineered **20 trading criteria** to weigh stocks of portfolios from the subsets of **top 3000** most liquid **equities** of the **US** & **CHN** markets Utilized data fields from the **price action** and **fundamental datasets**, operated with **time series** to generate statistically robust alphas
- Optimized each alpha to a minimum **Sharpe** of **1.25**, **fitness** of **1** and turnover below cutoff **70%** for an in-sample backtest of **5 years**

#### Web Developer Intern | Algozenith, Nagpur

[Mar 2023 - Apr 2023]

- **Overview:** Developed a Slack bot for asynchronous message processing & real-time communication between producers and Slack channels
- Engineered a scalable Node.js & TypeScript backend, leveraging type-safe for robust transaction handling & seamless Slack integration
  Created a Fastify Slack bot that delivers real-time alerts with timestamped notifications, capable of delivering 2000+ alerts per second
- Integrated RabbitMQ to reduce the message drop chance to 0% with acknowledgements and used PostgreSQL for transactions logging

#### PROJECTS

Cinesearch | Opensoft [Feb 2024 - Mar 2024]

Overview: Developed a movie website with responsive interface, enhanced search functionality, and effective recommendation algorithms

- Developed a **silver-wining** movie website using **ReactJS library**, ensuring a **responsive** interface with an engaging browsing experience
- Enhanced database performance by integrating **MongoDB Atlas Search**, strengthening search functionality with **querying** and **filtering**
- Implemented KNN using Cosine Similarity and collaborative filtering and achieved a minimum BCE of 0.606 on train and 0.610 on test

#### **Kryptonium | DApp for Online Transaction**

[Dec 2023 - Jan 2024]

Overview: Developed Kryptonium, a blockchain web application for Ethereum transactions using ReactJS, Solidity, and Metamask integration

- Engineered a **blockchain** web application to facilitate Ethereum transactions over **Ethereum Virtual Machine**, utilizing **ReactJS** and **CSS**
- Crafted and Implemented smart contracts using Solidity Language, and deployed on the Goerli Ethereum test network environment
- Integrated the Metamask Wallet extension for secure & user-friendly Ethereum wallet management within the web application interface

#### **AWARDS AND ACHIEVEMENTS**

- Attained title of Expert with a rating of 1615 on Codeforces (ID: Shahil\_Gupta) & 5\* with a rating of 2009 on Codechef (ID: atpuglihahs)
- Secured a global rank of 21 in the CodeChef Starters 135 2024 (Division 2) & 70 in the CodeChef Starters 123 2024 (Division 4) contests
- Ranked in the top 0.5% among over 1 Lakh students in Code with Cisco 2023, consequently securing a coveted Pre-Placement Interview
- Achieved an All India Rank amongst the top 0.8% in JEE Mains and the top 2% in the JEE Advanced 2021 amongst over 12 Lakh students

## **SKILLS AND EXPERTISE**

Languages - C | C++ | JavaScript | Solidity | Python | HTML | Java Libraries/Framework - ReactJS | Fastify | Typescript | Selenium Software - Visual Studio Code | Atom | Code::Blocks | Jupyter Notebook | Sublime | PyCharm | Slack | Microsoft Excel | Microsoft Word

### **COURSEWORK INFORMATION**

Programming and Data Structures\* | Design and Analysis of Algorithms | Computer communication and Networking | Algorithms 1 | Probability and Statistics | Advanced Calculus | Transform Calculus | Linear Algebra, Numerical and Complex Analysis \*(Lab + Theory)

## **POSITIONS OF RESPONSIBILITY**

# President | Poshan Chapter | Feeding India by Zomato

[Sep 2023 - Present]

- Spearheaded a team of 50 students to organize and execute a donation camp for an orphanage, coordinating the distribution of supplies
- Led a fundraising campaign, which culminated in the generation of over INR 50k to support the critical needs of underprivileged children

## Secretary Dramatics | Patel Hall of Residence | IIT Kharagpur

[Nov 2022 - Mar 2023]

- Conducted Practice sessions of the dramatics events, **General Championship**, **Social and Cultural** for the academic session 2022-2023
- Managed a budget of over INR 100,000 for Dramatics events, overseeing the organization of Stage Plays, Street Plays, and Choreography

## EXTRA CURRICULAR ACTIVITIES

- Sports: Won the Silver Medal in the Intra-Hall Chess Tournament at Patel Hall of Residence, securing 2nd place among 50+ participants
- Mentoring: Mentored 1st-year undergraduate students in the Programming and Data Structures, taught core concepts of C programming