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EDUCATION AND SCHOLASTIC ACHIEVEMENTS

Program	Institution	%/CGPA	Year
B Tech in Civil Engg (branch changed from Ocean Engg)	Indian Institute of Technology Madras, Chennai (**Dept 2nd Topper**)	9.03	2023
XII	Ryan International School, Navi Mumbai	94.4%	2019
X	Amity International School, Gurgaon	10	2017

- Kalidas Madhavpeddi **Scholarship'22**, Sole awardee out of 10,000+ students
- SMEC India-Australia **Scholarship'22**, with Pre-Placement Offer (**PPO**) for Asian consultancy operations
- OPJEMS **Scholarship'22**, Dept Rank 2
- Max Life Igenius **Scholarship**, 2x winner

Relevant Skills

Optimisation- Theory and Applications Log9 Energython'22- 1st prize Shell AI Hackathon'22- 3rd prize EXL Intl Hackathon'22- 1st prize Cyient Intl Hackathon'23- 2nd prize	**Bachelor's Thesis**, Guide- Prof Bhargava, IITM - Modelled the Indian railways with mathematical constraints - Travelling Salesman Problem variation- temporal graphs - Created an algorithm to publish as an academic research paper (WIP) **Linear Programming Demand Supply Optimiser for EV industry (Report)** - Optimised charging network for EVs in Delhi, Bangalore, Chennai - Minimised infrastructure cost for fast and slow charging stations - Practical application of graph theory and optimisation in Sustainability **Route optimisation for supply chain optimisation (Demo)** - Built end-to-end solution for time-window constrained min cost route optimisation and scheduling, **reducing carbon emissions** - Implemented custom dense graph algorithm, outperforming industry benchmarks - Real-time UI Map integration with live route updates, API provision **Prompt Optimisation Research Paper (Submitting to ICAIF'24)** - Optimised and built SOTA LLM hard-prompting pipeline - Approved by Emerging Analytics, ARD for publication **Autonomous Constraint Detection- Fidelity Investments** - Built a novel system for detecting constraints in tabular data - Optimised detection time by >94% for 1.2 million rows - Integrated with synthetic data generation for WI use case
Data Analytics, AI Fidelity EBL4.0 Winner Fidelity WITSIG Hackathon global finalist	**Synthetic Data Generation (Fidelity PPO- Return Offer)** - International collaborative project- Indo-US - Synthetic Data Generation- sensitive financial data production business case - Built end-to-end pipeline, code automation with internal package deployment - Increased data production by 200%, cost savings by 150% - Built Statistical models and analysis- 95.16% consolidated stat test score **ESG Divergence Analysis- Fidelity Investments** - Analysed ESG ratings for risk/returns for mutual funds and ETFs - Statistical hypothesis testing for ratings divergence vs annual returns - Accepted null hypothesis with a 5% significance level **LLM Benchmarking- Fidelity Investments** - Optimised and built SOTA LLM hard-prompting pipeline - Research paper (PrePrint) **AI Safety and Fundamentals** - Invited to the MIRI Berkeley Turing Prize Conference'22 - Amazon ML Summer School'21, 22 Graduate - Advocated for AI Safety at Effective Altruism Global Summit - AI Safety fundamentals course completed - Taught pre-university teachers to integrate AI in education

POSITIONS OF RESPONSIBILITY

Saarang Core, Head of DevOps (2021-22) https://www.saarang.org/	• Primary team of India's largest student-run fest, Saarang IIT Madras • Responsible for all websites, portals and mobile applications • Developed new features- backend and frontend • Led and managed a team of 12 members
Abhiyaan Software Module	• C++, python with ROS on Lidar navigation system for autonomous vehicles

EXTRA-CURRICULAR

Team Everest NGO, Volunteer for Child Welfare	• Voice-recorded motivational stories for children to listen to • Created English dictionaries with sentences for underprivileged children
National Service Scheme, IITM Branch Volunteer	• Collected material donations for the underprivileged, going door-to-door • Wrote educative articles on school-level physics for underprivileged children
Saathi Mentor, IITM Volunteer	• Mentored 5 juniors in their freshman year at IIT Madras
Guest Writer at Tinkle Magazine	• Contributing to India's top monthly comics magazine for children, writing stories and plot ideas
Effective Altruism (EA) (2022-present)	• Helped pre-university teachers get acquainted with ChatGPT • Arranged talks at pre-universities and demystified AI language models • Advocated for AI Safety and AGI regulation at EA conferences.

COURSES

MA2040 Probability, Stochastic Process and Statistics	OE1100 Modern scientific computing in programming language	CE3025 Traffic Engineering
CE5290 Transportation Network Analysis	CE4720 Computer Appls. in Traffic & Highway Engg	CS3205 Introduction to Computer Networks
CS2705 Programming, Data Structures	MA5741 Object-Oriented Programming	HS1110 French
NTU: Operations Research 1	NTU: Operations Research 2	BlueDot: AI Safety Fundamentals

WORK EXPERIENCE

Fidelity Investments, Bengaluru July'23-Present	Analytics, Research and Data- Data Scientist
	• Analysed ESG ratings for risk/returns for mutual funds and ETFs • Optimised and built SOTA LLM hard-prompting pipeline • Led teams to win 2 internal hackathons
Fidelity Investments, Bengaluru June'22-Aug'22 (Full-time return offer accepted)	Analytics, Research and Data- Summer Associate
	• International collaborative project- Indo-US • Synthetic Data Generation- sensitive financial data production business case • Built end-to-end pipeline, code automation with internal package deployment • Increased data production by 200%, cost savings by 150% • Built Statistical models and analysis- 95.16% consolidated stat test score
Harvard Project for Asian and International Relations, USA May'22-Aug'22	Harvard Tech Associate- Core Team
	• Handpicked by Harvard University- 4-member team • Ported to FERN stack from no-code platforms • Stack- Node.js, React.js, Firebase
TATA Caratlane, Chennai Dec'21-Feb'22	Software Dev Intern- Backend
	• OAuth reworked- Facebook and Google user auth flow • Migrating REST to GraphQL API function endpoints with unit tests • Pull request successfully merged with Production code • Stack- Express Node.js, GraphQL, SQL, Jest
FrontRow, Bengaluru Oct'21-Nov'21	Software Dev Intern- Full Stack
	• Built a scalable, real-time ranking system • Sole developer of the full-stack project • Developed a custom multi-user Elo-based rating algorithm • Stack- Node.js, React.js and MongoDB
Adorithm, Gurgaon Dec'19-Jan'20	Software Dev Intern (Python)
	• Built Python Webscraper to supply raw data for analysis from Bookmyshow.com, 100% automation in data collection achieved