

ADITYA JYOTI PAUL

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SUMMARY

An operator and problem solver who loves leveraging modern technologies and empathetic management to unblock roadblocks efficiently. Experienced in technical consulting, leading end-to-end products to fruition and managing teams, I am excited to solve tomorrow's challenging and impactful problems.

PROFESSIONAL EXPERIENCE

Founder, Head of Product, Phoenix HQ

Kolkata, India :: Oct 2023 – Present

Soft Skills: Strategy, Decision Making, Resilience, Empathy, Motivational Leadership.

Technologies/Tools: PostGres, Redis, MongoDB, PM2, NextJS, CI/CD, REST API, GraphQL, DataGrip, Cloudflare, ChatGPT.

- Founded Phoenix HQ and led the development of 5 product portfolios alongside Technical Consultancy services to B2B, BFSI, Retail and B2C clients.
- Architected the technology stack from the ground up that can scale up to 1M active users/month, with Postgres, NextJS, Vercel and Cloudflare.
- Building the core team to supercharge product development, sales and customer success, fostering a culture of collaboration and innovation.

Senior Technical Architect, Reflective AI

Fremont, California :: Jul 2021 – Sep 2023

Soft Skills: Product Engineering, Leadership, Communication, Creative solutioning, Critical thinking, Agile Methodologies.

Technologies/Tools: Python, SQL, PySpark, Computer Vision, NLP, Catboost, LSTM, AirTable, AWS, Jira, Zapier.

- Directed a project, in coordination with the CEO and other stakeholders, to strategize, design and deploy a Computer Vision solution for warehouse management, tracking and compliance for a client with a market cap over 5 billion USD, to be deployed in 5000+ warehouses.
- Managed a team of 5 engineers to optimize the end-to-end logistics solution within 3 weeks, testing across pre-processing techniques, architectures, hardware, quantization and post training optimization to achieve an accuracy boost of 5% over the baseline and a per device cost savings of ~60%.
- Created an ML pipeline for US index, options trading using, with a live test accuracy of 70%, improving baseline performance by 14%.
- Built integrations using Integromat and Zapier connecting our webhooks, Google Sheets, and Slack reducing customer turnaround time by 80%.

Technical Program Manager, Turing

Palo Alto, California :: Aug 2021 – Aug 2022

Soft Skills: Product Management, Leadership, Communication, Conflict Resolution, Negotiation, Collaboration, Cross-functional project roadmapping.

Technologies/Tools: Python, SQL, DataStudio, AirFlow, Grafana, Jira, Asana, Trello, PowerBI, Tableau, GCP, Monday.com, Bevy, Glynk, HubSpot.

- Led the transition to a new email delivery platform, comprising current-state assessment, requirements identification, vendor comparison and contract negotiation, and owned the technical solutioning to integrate all internal business requirements, increasing top-line email performance by over 30%.
- Drove all data-focused initiatives at Turing Community, responsible for Executive reporting, in collaboration with Data Science and Engineering Teams.
- Enabled time-constrained executive decision-making, and empowered Community Managers to create targeted events by translating OKRs to insights.
- Orchestrated the Bevy platform, which hosts the Community site, solving all related Product, Identity and Access Management and Data challenges.

Founder and Head of Research, Cognitive Applications Research Lab

Chennai, India :: Nov 2018 – Present

- Spearheaded research design, strategy and implementation, culminating in the publication of 20+ papers in AI, ML, CV, NLP and Security.
- Accelerated research progress, 15 papers selected in University Research Day, winning 3 Gold medals out of 15k+ students and PhD scholars.
- Trained a team of 10 research interns in research methods and best practices, implementation of end-to-end Deep Learning systems using advanced object detection and segmentation techniques, explainability and interpretability; with all of them completing their first research papers successfully.

Machine Learning Research Intern, Samsung Research Institute

Bangalore, India :: Oct 2019 – Aug 2020

- Coordinated the collection and cleaning of 50,000+ data points across 200+ individuals, tracking population statistics to avoid bias in the data.
- Devised two online handwriting recognition models for low-resource languages like Bengali and Tamil, comparing both point-to-point and Bezier curve approaches, and finally deployed a prototype on a Samsung device with TensorFlow Lite having a char. acc. of 85% and word acc. of 62%.
- Designed a fast error correction scheme in addition to CTC loss; coordinated with Samsung researchers to develop Bengali BERT, after which the incorrect words were replaced by the most similar of the top-5 masked-LM predictions improving word acc. from 62% to 76%, hosted on Heroku.

Research Assistant, SPARC Research Initiative

Chennai, India :: Jun 2019 – Jan 2020

- Developed an end-to-end Computer Vision solution, managing all the aspects from data collection to deployment, to detect the stages of Diabetic Retinopathy, in association with UC Davis and funded by IIT Kharagpur and Ministry of Human Resource Development, Govt of India.
- Investigated the impact of various techniques for pre-processing like CLAHE, clarity boost and for augmentation like MixUp, CutMix, AugMix.
- Deployed the model at scale on AWS, and collaborated with doctors in SRM Hospital to deploy the solution, having an acc. and F1 score of 90%.

Unergia, ML Engineer

- Consulted with the Founder to create the end-to-end roadmap for a solar power management product.
- Owned Data Collection from online data sources and spearheaded the program to collect real-world data in complex industrial scenarios by identifying the right components for measurement and transfer of data, followed by the ETL pipeline including data cleaning, validation and versioning.
- Built the initial combinatorics model as baseline followed by implementation of the Deep Learning Model.

Level Infinite, Course Instructor

Bangalore, India:: Jun 2016 – Feb 2017

- Created a course on Java from scratch, designed questions and graded solutions, with one-on-one doubts clearing.

SELECTED PUBLICATIONS (complete list on my Scholar Profile)

- Local and Global Context-Based Pairwise Models for Sentence Ordering**, R.R. Manku, A.J. Paul, *Knowledge-Based Systems*, Elsevier, 2022.
- Rethinking Generalization in American Sign Language Prediction for Edge Devices with Extremely Low Memory Footprint**, A.J. Paul, P. Mohan, S Sehgal, *Recent Advances in Intelligent Computational Systems (RAICS)*, IEEE, 2021.
- A Tiny CNN Architecture for Medical Face Mask Detection for Resource-Constrained Endpoints**, P. Mohan, A.J. Paul, A Chirania, *Innovations in Electrical and Electronic Engineering (ICEEE)*, Springer, 2021.
- Advances in Classifying the Stages of Diabetic Retinopathy Using Convolutional Neural Networks in Low Memory Edge Devices**, A.J. Paul, Madras Section International Conference (MASCON), IEEE, 2021.
- Recent Advances in Selective Image Encryption and its Indispensability due to COVID-19**, A.J. Paul, *RAICS*, IEEE, 2021.
- Randomized fast no-loss expert system to play tic tac toe like a human**, A.J. Paul, *Cognitive Computation and Systems*, IET, 2020.

VOLUNTEERING

- Reviewer** for 10+ articles in IEEE, Springer and Elsevier journals and conferences.
- Google AI Explore ML Facilitator**, among the first 50 instructors piloting the program internationally, impacted 1000+ students and faculties.
- Google CodeIn Mentor** for TensorFlow, instructed 13-17 years old students in their first steps in Open Source and Machine Learning.
- Mentor and Instructor** for various organizations like EduBacus, LearnByResearch, Level Infinite, GirlsScript, Uplift Foundation, Tech Analogy and more.

ACHIEVEMENTS AND AWARDS

- Two Time University Gold Medalist and Best Paper Award Recipient** amongst 5k+ students and PhD scholars from the Dept. of CSE for the papers "A Randomized No-Loss Algorithm to Play Tic Tac Toe like a Human" in 2019 and "An efficient analyses of the Behavior of 1D Chaotic Maps using 0-1 Test and Three-State Test" in 2020.
- Two Time Scholarship Recipient** from Facebook (2019) and Nutanix (2020) for pursuing Secure and Private AI and Hybrid Cloud on Udacity.
- Google AI Letter of Appreciation** for being selected amongst the top 20 out of 130+ facilitators in the ExploreML program across the country.
- Research appreciation from Samsung Research Institute, and SRM IST and UC Davis, California.**

SKILLS AND INTERESTS

- Software Languages and Frameworks:** Python, Java, C++, C, MATLAB, Simulink, SQL, MySQL, R, HTML, CSS, JS, React.
- ML and Data Analysis:** TensorFlow, PyTorch, Scikit-learn, MXNet, AWS SageMaker, GraphLab, Matplotlib, Numpy, Pandas, OpenCV, Plotly, Tableau.
- DevOps, Cloud Services:** Git, Vim, Unix, Linux, CircleCI, Redis, Docker, Heroku, AWS, Google Cloud Platform, Edge Impulse, Weights and Biases.

EDUCATION

SRM Institute of Science and Technology, B. Tech. in Computer Science Engineering

Chennai, India :: Jul 2017 – Jul 2021

Coursework: Machine Learning, Artificial Intelligence, Data Structures, Algorithms, Databases, Probability, Discrete Math, Operating Systems, Networks.