

VINAMRA VASHISHTH

[linkedin.com/in/vinamra-vashishth](https://www.linkedin.com/in/vinamra-vashishth) | vinamra.vashishth@columbia.edu | github.com/VinVash | www.vinvash.tech

EDUCATION

Columbia University

MS in Computer Science (*Machine Learning Track*)

Indian Institute of Information Technology Kota

B.Tech. in Computer Science and Engineering *GPA 3.95/4 (5th Rank)*

New York, NY

08/25 - 12/26

Kota, Rajasthan, India

11/20 - 08/24

PROFESSIONAL EXPERIENCE

Melio Labs

Full Stack Data Engineer

(07/24 - 08/25)

Full Stack Data Intern

(01/24 - 06/24)

Software Dev. Intern

(12/22 - 12/23)

Transformed Melio's data infrastructure, enabling real-time multi-pathogen surveillance on diagnostics platforms deployed on the cloud, boosting efficiency by 40%.

- Spearheaded the development of Melio's data pipeline, enhancing the time series analysis of DNA melting data which contributed to a 30% improvement in data processing efficiency.
- Accelerated PCR data processing by 40% using optimized machine learning pipelines, enabling faster turnaround times for critical R&D experiments and improved data driven decisions.
- Implemented a full-stack software - "Catalog + Task Runner" that streamlined data management and post-processing tasks, resulting in an impressive 50% increase in user productivity.
- Constructed a web-based dashboard application for real-time monitoring of melting experiments, streamlining workflow and reducing data analysis time by 50%.

PROJECTS

Catalog + Task Runner

(01/24 - 08/25)

Pioneered a web-based data management system automating workflows for 10,000+ blood sample chips; study timelines decreased by 3 weeks due to rapid data insights.

- Innovated a robust data grid (Catalog) that reduced manual chip search time by 75%.
- Engineered an intuitive Task Runner interface incorporating Machine Learning pipelines, which decreased data processing time by 50% per experiment and allowed for faster data analysis.

**Time Series Annotation
Using Active Learning**

(03/23 - 05/23)

Engineered a web application utilizing K-Means clustering and active learning to annotate a PCR melting dataset, reducing manual data labeling time by 99%.

- Leveraged a PCR melt dataset of 10 million data points to demonstrate application's efficacy.
- Pioneered the integration of 'Uncertainty Sampling' strategy within the K-Means clustering algorithm, leading to continuous refinement based on expert feedback and 10x faster labeling.

E-Daftar

(07/22 - 08/22)

Developed a corruption-free file tracker-cum-manager during Smart India Hackathon 2022, streamlining administrative workflows. Achieved Runners-up position among 100 teams.

- Devised a secure, dual-module system that utilized multi-factor authentication, enhancing inter-departmental efficiency and saving each employee approximately 10 hours per month.
- Achieved a transparent workspace through the digitization of file movements and real-time tracking updates, improving process transparency and saving ~500 hours annually per office.

POSITIONS OF RESPONSIBILITY

Lead Organiser,

HackTheChain (03/23)

- Orchestrated a global hackathon "HackTheChain" with over 800 registrations, securing 15+ sponsors and raising a prize pool of over INR 150 K through strategic planning.

Core Team Member, Zine

Robotics (02/21 - 03/22)

- Mentored 100+ students in a 10-day robotics workshop, resulting in a 40% increase in student participation and students securing top ranks in prestigious national competitions.

Project Volunteer,

SPENBIO (05/21 - 10/21)

- Led initiatives in waste management and Himalayan protection involving 50+ volunteers.
- Designed a platform for improving the team's remote collaboration amid Covid lockdown.

TECHNICAL SKILLS

- **Programming Languages:** C / C++, Javascript, Typescript, Python, Solidity
- **Libraries:** OpenAI, Sk-learn, Pytorch, Numpy, Pandas, Mongoose, React.js, Redux Toolkit
- **Frameworks:** Langchain, Flask, FastAPI, Node.js, Next.js, Express.js, Hardhat
- **Generative AI:** Prompt Engineering, Retrieval-Augmented Generation
- **Miscellaneous:** Shell, Git, RESTful APIs, MongoDB, Docker, Web3, Blockchain

Hackathons

- **Runners Up**, Smart India Hackathon, 2022 - Developed a file management system.
- **3rd Position**, Unscript Rookie Hackathon, - Developed a hostel management system.

Literary Enterprise

- **98.25 percentile** among 1.1 million+ applicants – **JEE Main (Entrance Exam), 2020**