

# ADITYA KULKARNI

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## EDUCATION

**Indian Institute of Technology (BHU), Varanasi**  
*Dual Degree (B-Tech + M-Tech) in Mathematics and Computing*

*Current GPA: 9.13 / 10.0*  
*May 2025*

## EXPERIENCE

**Microsoft Research | *Research Software Engineering Intern*** January 2025 – July 2025

- Worked on an **Artificial Intelligence** Workflow, which supports Software Migrations and Bug Handling.
- Designed **Interactive Report** Generating System for the Framework to draw significant insights from Test Logs.
- Gained exposure to Generative **AI-backed Software Development Workflows & Rate Limiting** Systems.
- **Exposure:** AI Workflows, Azure APIs, Python, Pydantic, .NET, Systems Design, Microsoft Azure.

**Schrödinger (D. E. Shaw) | *Software Engineering Intern*** May 2024 – July 2024

- Expedited **LiveDesign** deployment on **AWS** by increasing the throughput of **RWX-based** pods by **6.5** times.
- Implemented AWS FSx for Lustre & OpenZFS, NFS Server Provisioner, and Longhorn Provisioner storage classes.
- Conducted robust testing for **5+** testing scenarios to get the **Real, User, and Sys** time for every scenario.
- Tested and added **2x** backup, **restoration, and snapshotting** capabilities for RWX volumes in case of data loss.
- Compared proposed solutions based on **Throughput, Latency, and Backup** to identify the best-fit option.
- **Exposure:** K8s, Bash, Linux, Helm Charts, Amazon Web Services, Google Cloud Platform, Microsoft Azure.

**HackerRank | *Technical Content Curator Intern*** May 2023 – July 2023

- Authored **50+** **Algorithmic** problems to assess candidates in Online Assessments for the **HackerRank**.
- Reviewed **75+** algorithmic problems for **Quality Benchmarking** and provided constructive feedback.

## HONOURS AND ACHIEVEMENTS

- **Candidate Master** (Max. Rating **1992**) on Codeforces (User-ID: **EDITH**)
- **5-Star** (Max. Rating **2005**) on CodeChef (User-ID: **pikachu\_2717**)
- **Secured Honorable Mention** in The 2022 **ICPC** Asia Amritpuri Programming Contest.
- **Global Rank - 705, India Rank - 468**, in Google Kickstart Round G 2022.
- Global Ranks **88, 95, 149** in Codeforces Round Educational #131 (Div. 2), #804 (Div. 2), #721 (Div. 2).
- Global Rank **145, 149 and 169** in Starters 28, March Cook-Off 2022, and July Cook-Off 2022, respectively.
- Selected for **Amazon** Machine Learning Summer School 2023 out of **61,000** applicants all over the world.
- Secured CPI **9.94** in the first academic year and the batch Institute Rank of 6 across all disciplines at IIT (BHU).

## PROJECTS

### Advanced Multi-Process Unix Shell

- Developed a **Unix shell** with advanced features of pipe redirection & signal handling for **5+** concurrent processes.
- Implemented efficient command parsing & job control, reducing execution time by **30%** for **5+** processes.
- Enhanced functionality with 10+ built-in commands, I/O redirection, and seamless history management.

### Object Detection using YOLOv3

- Built a deep learning model with Python for object detection using YOLOv3 for **80 different object classes**.
- Improved accuracy by using YOLOv3 over traditional R-CNNs to identify objects, on **larger-sized images**.

## SKILLS & INTERESTS

**Languages & Utilities:** C, C++, Python, Bash, Java, SQL, Git/GitHub, Visual Studio Code, Sublime Text, Replit

**Technologies:** AWS (S3, EKS, VPC, FSx, ECR, EC2, IAM), Google Cloud Platform, Microsoft Azure, Kubernetes, Longhorn, NFS Ganesha Provisioner, HTML5, CSS3, ReactJS, ExpressJS, NodeJS, MongoDB, Mongoose

**Technical & Soft Skills:** Data Structures & Algorithms, Operating Systems, DBMS, Leadership, Public Speaking

**Areas of Interest :** Competitive Programming, Image Processing, Full Stack Development, Distributed Systems

## EXTRA CURRICULAR ACTIVITIES

- **Co-Convenor**, Technex '24 IIT (BHU) Varanasi, the Oldest Techno-Management Festival of Asia.
- **Student Parliamentarian**, IIT (BHU) Gymkhana, worked as part of the Hostel Affairs and Alumni Committee.