

ARAVINDA KASHYAP

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SUMMARY

- ML Researcher and Software Engineer with 2 years at Shell, delivering scalable integration systems saving \$1.5M OPEX/year.
- Former Research Assistant at IIT Delhi, contributed to image super-resolution research.
- Published author at IEEE (CSITSS 2023).
- Currently at Virginia Tech's PRIME Lab, exploring the intersection of ML and HCI in multi-agent systems.
- Skilled in Python, C++, applied ML, and full-stack development.

EDUCATION

Virginia Tech - Blacksburg, VA	M.S. in Computer Engineering	Aug 2025 – Present
• Coursework: Computer Architecture, Advance Machine Learning, Advance Database Management System		
Siddaganga Institute of Technology - Bangalore, India	B.E. in Information Science & Engineering (CGPA: 9.32/10)	2019 – 2023

WORK EXPERIENCE

Shell plc (Global Oil and Gas Company)	Associate Software Engineer	August 2023 – August 2025
• Built scalable and reusable integration pipelines to govern and process terabyte-scale data with secrets rotation and zero P1 incidents.		
• Designed an efficient data mover framework that cut interface delivery from 12 weeks to 5 days and saves \$1.5M OPEX annually .		
• Developed a PowerApps + ADF cost estimator adopted across departments, automating pricing scenarios and saving ≈375 engineer-hours/year .		
• Led an after-hours initiative to build a PowerApps ride-share matcher, solo-built, praised by VP leadership; reduced carbon emissions and improved travel safety.		
ISRO - Indian Space Research Organization	Software Development Intern	April 2023 – June 2023
• Built a React + Node software application that channels satellite telemetry from ground antennas to the ground system, displaying live sensor data with acquisition/exit timestamps in a 24×7 view.		
• Engineered a bidirectional socket layer linking antennas and backend controllers, enabling sub-second uplink/downlink with a secure, horizontally scalable architecture.		
Indian Institute of Technology, Delhi	Research Assistant	April 2022 – December 2022
• Researched manifold-regularized super-resolution, implementing LapRLS/LapSVM pipelines in Python that improved PSNR/SSIM on benchmarks and contributed to MISN group reports on image-enhancement ML.		

RESEARCH & PROJECTS

Flock AI	https://flockshop.ai/
• Designed and built a responsive React front-end for Flock.ai , an AI platform that generates brand-specific models; delivered a reusable component library that scales across web and mobile while preserving each client's aesthetic.	
Echo: Real-time Chat Application	https://echo-vt.netlify.app/
• Built "Echo," a full-stack real-time chat app (React, Node, Express, Socket.io) that achieves <100 ms message latency over WebSockets.	
• Shipped a feature-rich UX: public/private rooms, auth, typing & presence indicators, emoji picker, code-protected sessions using responsive Tailwind + Material-UI components.	
MediSync: IoT & ML medication adherence	Research Paper Link
• Built "MediSync," an IoT smart pill-box with nano-cameras and YOLOv4 tablet recognition; tracks regimens, flags low supply/adherence, and sends alerts to patients & caregivers.	
• Achieved 97% real-time accuracy; results published in <i>CSITSS 2023</i> proceedings.	

TECHNICAL SKILLS

Languages: Python, JavaScript (ES6), C++ **Cloud:** ETL, Azure Data Factory, Functions, Databricks, Azure DevOps, Apache Kafka, AWS(S3,EC2) **Development:** React, NodeJs, Express, CSS, HTML, Web Sockets, RESTful and GraphQL APIs **Databases:** Azure SQL, MySQL, MongoDB **Tools:** Git, GitHub, CI/CD, Power Apps, Power BI, Copilot **ML:** Reinforcement ML, Computer Vision, HCI
Certificates: AZ-900, Construx, Green Software Practitioner

HONORS AND AWARDS

- Certificate of Recognition from **Shell VP-HR** for leading company-wide DEI initiatives through Young Shell India.
- Letter of Appreciation from **Shell IDT Manager** for delivering a critical stakeholder project ahead of schedule.
- Star employee of the month at Shell (x2)
- Highest SGPA (9.52/10) & **Best Mini-Project 2022** ("Medication Adherence IoT Solution") – Siddaganga Institute of Technology.

LEADERSHIP AND ACTIVITIES

President, **DeCoders Programming Club** — led 40-member team to run a week-long flagship tech fest, two college-wide hackathons, and monthly web-dev/problem-solving workshops; launched peer-mentorship tracks that reached 300+ students.

Executive Board, **IEEE Student Branch** — organised technical talks and networking events, boosting club participation by 15%.