

Mayank Roy

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EDUCATION	University of Pennsylvania , School of Engineering & Applied Science, Philadelphia, PA Master of Computer and Information Science Relevant Coursework: Software Systems, Big Data Analytics, Engineering Entrepreneurship	Expected May 2027
	SRM Institute of Science and Technology , Chennai, India Bachelor of Computer Science and Engineering , GPA: 3.97/4 Relevant Coursework: Data Structures & Algorithms, Operating Systems	May 2025
SKILLS	Languages: Python, Javascript (and Typescript), C++, SQL, HTML5/CSS3, Java Web-Development: Node.js, Next.js, React.js, Nuxt.js, SvelteKit, Flask, Django Infra/Backend: Git, AWS, Redux, PostgreSQL, Docker, MongoDB, Firebase, Supabase, FastAPI	
EXPERIENCE	UNIVERSITY OF PENNSYLVANIA – Philadelphia, USA <u>Graduate Teaching Assistant – Database and Information Systems (CIS 550)</u>	September 2025 – Present
	CINKOD DEVELOPERS PVT. LTD. – Chennai, India <u>Software Engineering (Full Stack Developer) Intern</u> <ul style="list-style-type: none">Architected robust and scalable PostgreSQL backend and RESTful API middleware features pertaining to user authorization and metadata management for an inter-college developer organization across 13+ collegesEngineered intuitive, streamlined role-based console for assigned college administrators to manage events, ticketing, and user registration; Analyzed role-based data obtained to drive up engagement through UX by roughly 5%Strategized decision making on DB hosting, dramatically reduced monthly infrastructure costs by 35% through thorough analysis of AWS EC2 usage optimization patterns and neglecting use of managed servicesShipped Accelerated feature delivery by 15%, shipping production-ready code one week ahead of schedule through effective planning and communication	April 2024 – June 2024
	SECURRA HEALTH – Chennai, India <u>React.js (Frontend Developer) Intern</u> <ul style="list-style-type: none">Translated the organizations mobile-native health tracking features into a responsive web interface using React.js, focusing on constructively displaying user health metricsImplemented a data-driven health dashboard that utilized REST API calls to fetch and render critical patient metricsCreated a centralized state management system using Redux to cache API responses effectively reducing redundant database queries and cutting instance costs by 8%Integrated with team within Azure Devops environment to manage version control and code integration	June 2023 – July 2023
PROJECTS	PennCloud , CIS 5050 – Software Systems / 2025 <ul style="list-style-type: none">Engineered a highly available distributed storage and messaging backend using C++ in a docker environment, implementing a custom Key-Value store to manage file manifest, metadata, emails and more.Architected a highly fault tolerant replication engine based on Paxos Consensus model to ensure strong consistency between server nodesDesigned a robust checkpointing and recovery logic to minimize downtime, prevent data loss, network partitions and ensure quickest recovery	
	Fleetwise , IIT Mumbai Hackathon / 2023 <ul style="list-style-type: none">Developed a robust and scalable full stack fleet management application using next.js (App router), PostgreSQL, SQLAlchemy, and FastAPIDesigned a custom text-based navigation system using FastAPI to bypass restrictive use of third-party library constraints; ensured 100% of the core functionality remained intact despite environmental limitationsImplemented containerization with Docker and hosted image on DockerHub, streamlining CI/CD process, reducing setup time in hosted environments by 20%	
	Personal Portfolio / 2023 (& 2026) <ul style="list-style-type: none">Upgraded existing portfolio application utilizing sveltekit, Go and Firestore	
ACTIVITIES	Lead Representative - CHiPSET / 2023-2024 <ul style="list-style-type: none">Organized two major annual events – ‘Hello Hackers’ and ‘TechXchange’, chaired club recruitments processes and organized 5+ workshops to impart senior year technical knowledge and useful tips to freshman students	
	Volunteer at Engin / 2025 <ul style="list-style-type: none">Volunteered to virtually teach English 1-on-1 for 6 months to a Ukrainian refugee committing 2 hours each week.	