

SHATAKSHI RANJAN

shatakshiranjana02@gmail.com | +1(609)721-5507 | GitHub: ShatakshiRanjan | LinkedIn: shatakshi-ranjan

EDUCATION

Bachelors of Science in Computer Science & Information Technology and Informatics *Sept. 2021 – May 2025*
Rutgers University–New Brunswick - New Jersey, USA *GPA: 3.76, magna cum laude*
- **5x National Collegiate Hackathon Winner** - recognised for technical innovation and execution of real world problems
- Technical focus in **full-stack development, AI/ML, and data-driven system design**

PROFESSIONAL EXPERIENCE

Software Engineer - Coding and Social Lounge (CSL) *New Jersey, USA | Sept. 2023 – May 2025*
Rutgers University – Computer Science Department

- Founded and engineered the **CSL Queue System**, a full-stack platform (**React, Node.js**) serving 1,000+ students/semester and **reducing average wait times by 65%**
- Implemented complete **SDLC methodology** with automated CI/CD pipeline using GitHub Actions including testing, code quality checks, and production deployment; reduced deployment time **from 10 minutes to under 2 minutes**
- Dockerized and deployed on a **Raspberry Pi**, optimizing memory and startup for low-power hardware
- Configured **Google IAM** for secure role-based access, managing credentials and permissions across 4+ contributors
- Integrated Google Forms API and built dashboards to visualize course demand and peak usage (100+ daily requests)
- Secured **\$100K in departmental funding** by demonstrating system performance, scalability, and student impact

Cyber Security Intern - Data Division *Mumbai, India | June 2024 - August 2024*
Reliance JIO

- Developed **Taskify**, a secure task and project management portal using **Flask and MySQL**; implemented audit logging and access control to **improve team productivity and data traceability by 45%**
- Architected a scalable **MySQL-backed messaging system** with automated data retention and timestamp-based archiving, minimizing DevOps overhead and storage costs
- Demonstrated secure big data pipeline automation with **Apache NiFi, Hadoop, and Spark** to senior engineers, highlighting potential for **30% reduction in manual processing** and improved data reliability through encryption
- Implemented user authentication and conducted **SAST/DAST** vulnerability assessments to ensure InfoSec compliance

Software Development Intern *New Jersey, USA | July 2023 - August 2023*
Princeton IT Services

- Developed a headless CMS prototype with geo-targeted routing based on user location to serve region-specific content, and SEO-friendly URLs using Sanity.io, enhancing content delivery and **discoverability by 30%**
- Built responsive marketing pages with **GSAP animations** and cross-device optimization, **improving user engagement metrics by 35%** across all devices
- Analyzed user behavior with **Google Analytics** to drive frontend optimizations that improved retention and conversions

LEADERSHIP & INVOLVEMENT

Marketing Director (May 2022 – May 2023), HackHERS Director (June 2023 – Dec 2023)
Women in Computer Science (WiCS), Rutgers University

- Directed HackHERS, NJ's largest femme, female, and non-binary hackathon; drove outreach and **secured \$26K+ in sponsorships for 200+ attendees**
- Collaborated with a 20-person team to execute event logistics, speaker coordination, and attendee experience
- Ran social media campaigns and automated weekly mailing lists to boost event attendance and engagement
- Built and maintained **responsive websites for WiCS and HackHERS**, collaborating cross-functionally with other directors to centralize event information and enhance digital visibility.

PROJECTS

Collaborative Filtering-based Recommendation System *Python, Numpy, Pandas, Scikit-learn*
• Built a personalized recommender using MovieLens, **achieving MAE of 0.7393 and RMSE of 0.9501** through data imputation, feature scaling, and model tuning; similar to market basket systems used in e-commerce
• Integrated genre-based filtering and anonymized user data to enhance explainability and user trust
• Selected among the **top 20 projects** out of 110 for department seminar; presented via **slide deck**

Mama's Garden – Smart Plant Monitoring System *Python (Flask), MongoDB, Gemini AI*
• **Best Social Good Track Winner at HackHERs 2025**, recognized for impactful AI-driven sustainability solutions
• Developed API integrations with MongoDB and Gemini AI to process and visualize live IoT sensor data (e.g., humidity, temperature) using Flask and Matplotlib
• Built a RESTful API to connect frontend and backend with synchronous data flow and error handling

Stock Trading Algorithm *ThinkOrSwim Script*
• Built a trading algorithm using MACD and RSI indicators, **achieving 45% accuracy** in real-time conditions
• Automated technical analysis with graphical indicators to generate data-driven trading signals
• Implemented stop-loss and take-profit mechanisms to improve risk management and trading efficiency

TECHNICAL SKILLS

Programming & Development: Java, Python, JavaScript/TypeScript, React, Vue.js, Next.js, Node.js, Unity, Git, Spring Boot, Docker, Flask, Django, Tailwind CSS, Postman, UI/UX (Figma), REST API Development, Microservices

Data & Machine Learning: Big Data (Hadoop, Spark), MongoDB, SQL, MATLAB, Matplotlib, Numpy, Scikit-Learn, Pandas, TensorFlow, Tableau, OpenCV, MediaPipe

Systems & Cloud Platforms: Google IAM, PowerShell, Apache, Google Cloud, AWS Cloud, CI/CD (GitHub Actions)