Raunak Shukla

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EDUCATION

New York University - Tandon School of Engineering   *May 2025*
Master of Science (MS) in Computer Science   GPA: 3.73/4.0
Relevant Coursework: Algorithms, Software Engineering, Java, Big Data, Machine Learning, Data Visualization, Network Security

Vellore Institute of Technology, Vellore   *May 2023*
Bachelors of Technology (B.Tech) - Computer Science and Engineering   GPA: 8.44/10
Relevant Coursework: Data Structures, Operating Systems, Database Systems, Cloud Microservices, Object Oriented Programming

WORK EXPERIENCE

Building Diagnostics Robotics - Software Engineer   *June 2025 - Present*
- Developed a ML pipeline for automated curve fitting and model evaluation across CSV datasets using Chebyshev, spline, ridge, and piecewise regression; implemented train/test RMSE analysis to optimize generalization and visualize performance, achieving an average **R2 score** of **0.98**.
- Revamped BDR's website architecture with modular **Next.js** components & **Redux** for state management; implemented mobile-first design improvements including dynamic navigation & exit-intent modals, & launched new service verticals & blog content using MDX & static generation, enhancing user engagement & content accessibility.

Building Diagnostics Robotics - Software Engineer Intern   *March 2025 - June 2025*
- Spearheaded a scalable cross-platform app (iOS & Android) using **React Native** and **Flask**; designed a serverless backend with **AWS Lambda, GraphQL, Cognito, and API Gateway** to support **1000+ users** and set up a **CI/CD** pipeline using **AWS** to streamline release workflows and reduce deployment cycles by **15%**.
- Built interactive, scalable pages for BDR's website using **Next.js**, **Tailwind CSS**; implemented dynamic routing, reusable components, custom hooks to manage UI state & dynamic user interactions, enhancing UX & performance.

NYU Tandon Career Hub - Bootcamp Admin   *Sept 2024 - May 2025*
- Oversaw LeetCode & Data Science bootcamps with ~500 participants across two semesters, managing logistics, automating data collection & analysis with **Google Sheets**, and increased program retention by **20%**.

Radical AI - Software Engineer Intern   *June 2024 - Aug 2024*
- Built a real-time chat interface for the company's website with **OpenAI API** and scalable backend solutions using **Node.js** and **Firebase-CLI**, including features like session management and chat history and optimized user experience with quick action buttons and default prompts

Young Tycoons Business Challenge - Software Developer   *Nov 2021 - Aug 2022*
- Developed a production-level website for a business hackathon challenge, building reusable components, key web pages, and a backend server with **RESTful APIs** using **React.js** – supporting seamless frontend-backend integration, user authentication, data manipulation, and state management for **20,000+** users.

PROJECTS

IntelliQuest - Academic Paper Search Engine
- Developed a search engine for academic papers using **React.js, Django**, and **PostgreSQL, Docker, RESTful APIs** and hosted on **DigitalOcean** with features like advanced search options, related papers etc.

AI Resume Builder
- Collaborated in a team of four during a hackathon to build a web app that parses PDF resumes and uses the **OpenAI API** to generate or rewrite bullet points based on user-provided prompts or keyword utilising **Next.js** and **Supabase** for authentication and data storage and **Vercel's v0** for rapid UI prototyping and seamless deployment.

Safeguarding NYC: Analyzing Crime Patterns using Big Data
- Engineered an **ELT pipeline** using **Spark** to transform and preprocess **218k+ NYC crime data**, leveraging **GCP** & **Airbyte** for data ingestion, integrating **Medallion Architecture**, and visualizing insights on **Snowflake**.

TECHNICAL SKILLS

Programming Languages: Python, Javascript, TypeScript, C++, Java, C, SQL, MySQL, PySpark, Bash, Git, HTML/CSS
Frontend: React.js, Next.js, React Native | **Backend**: Node.js, Django, REST APIs, PostgreSQL, MongoDB, Spring
Cloud: Docker, Kubernetes, AWS, GCP, CI/CD, Jenkins | **Software Dev:** DevOps, Agile, Scrum, Software Testing. Linux
AI/ML: Data Analytics, TensorFlow, PyTorch, GenAI, LLMs, Agentic AI, MCP, Recommender Systems, Fine Tuning
Tools: Visual Studio, Cursor, Android Studio, Github, Gitlab, Spark, Snowflake, Tableau, PowerBI, Terraform, Splunk