

Rohan Kumar

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EDUCATION

University of Illinois at Urbana-Champaign

Expected Graduation Date: May 2027

Bachelor of Science in Computer Science and Statistics (GPA: 3.89 / 4.00)

Champaign, IL

Coursework: Object Oriented Programming, Data Structures, Algorithms, Database Systems, Computer Systems, Distributed Systems, Probability & Statistics, Statistical Modeling, Statistical Learning, Numerical Methods, Linear Algebra

SKILLS

Programming Languages: Python, C#, C/C++, Java, JavaScript, SQL, HTML/CSS, TypeScript, R

Frameworks & Libraries: React Native, React, Node.js, Flask, Django, TensorFlow, PyTorch, Scikit-Learn, Pandas, Numpy

Cloud & DevOps: AWS (Lambda), Google Cloud Platform, Docker, CI/CD, Git, Azure Services, Kubernetes

Tools & Concepts: RESTful APIs, GraphQL, Agile, Test-Driven Development, Large Language Models (LLMs), Microsoft Office

EXPERIENCE

Software Engineer Intern

May 2025 – Present

Relativity

Chicago, IL

- Decreasing engineer on-call time by 20% by extending internal APIs and building automated GitHub actions workflows.
- Developed and optimized .NET (C#) migration jobs to transition over 1TB of data from legacy MySQL systems to Azure-hosted NoSQL MDS, improving scalability and reducing query latency by 25%
- Designing dynamic memory-allocation logic for APIs, reducing memory-timeout incidents by 25% across 40+ AKS clusters.
- Technologies:** C#, .NET, Azure Kubernetes Service (AKS), MySQL, Docker, RESTful APIs, GitHub Actions

Software Engineering Research Assistant

January 2024 – Present

University of Illinois at Urbana-Champaign

Urbana-Champaign Area, IL

- Engineered a data pipeline in Python to provide insights for teamwork behaviors across 100+ GitHub repositories.
- Architected a scalable Firebase infrastructure, enabling efficient data management for 120+ simultaneous users.
- Developed a responsive Next.js dashboard interface with real-time data tracking deployed through Qualtrics.
- Technologies:** Python, Numpy, Pandas, Seaborn, Sci-Kit Learn, Next.js, GCP, Firebase, RESTful APIs

Software Engineer Intern

June 2024 – July 2024

AM Best

Oldwick, NJ

- Developed an API in .NET using C# to efficiently display financial records and credit ratings for 300+ insurance clients.
- Enhanced microservice performance with efficient database queries and caching, reducing query response times by 25%.
- Built a Blazor web app using RESTful APIs and MySQL for real-time data sync to efficiently handle 1k+ insurance records.
- Technologies:** C#, MySQL, Blazor, ASP.NET, SwaggerUI, Postman, Azure Services, RESTful APIs, CI/CD

PROJECTS

PAUL | Software Engineer at Illinois Business Consulting (IBC), UIUC

- Developed an internal LLM assistant using Python to enhance workflow efficiency for 150+ active consultants by intelligently answering case-related and organizational queries using prompt classification and hybrid retrieval-generation techniques.
- Engineered a prompt type classifier to route queries either to the OpenAI API with embedded IBC-specific context or to a Pinecone vector database, enabling semantic search across past consulting project data to generate case-relevant responses.
- Technologies:** Python, OpenAI API, Pinecone, Scikit-Learn, FastAPI, Docker, Large Language Models (LLMs)

PowerBox Technology | Software Engineer at Gies Disruption Lab, UIUC

- Designed and deployed an AI-powered energy modeling platform, integrating Python, Prophet, and Google Cloud Platform to optimize power usage simulations across Latin American regions.
- Integrated machine learning models to improve energy consumption forecasting based on regional and temporal patterns.
- Technologies:** Python, Google Cloud Platform (GCP), Vercel AI, Prophet, Scikit-Learn

Transcarotid Artery Revascularization (TCAR) Prediction Model | Research Assistant at Cooper Medical School

- Developed predictive models to determine likelihood of extended hospital stay in patients undergoing TCAR, using logistic regression tests as well as Random Forest and XGBoost, improving prediction accuracy by over 40%.
- Generated 10+ visualizations to present insights to Cooper Medical residents and support evidence-based decision-making.
- Technologies:** Python, Pandas, NumPy, Seaborn, Matplotlib, Sci-Kit Learn, XGBoost

LEADERSHIP

Technology Director

May 2025 – Present

National Organization for Business and Engineering (NOBE): Illinois Chapter

Urbana-Champaign Area, IL

- Leading a team of 40+ student SWEs across 5+ technical projects for clients including SafeFit, kWh, UIUC, and more.

Content Coordinator

January 2025 – Present

Reflections|Projections

Urbana-Champaign Area, IL

- Led outreach efforts to secure 15+ tech industry leaders for R/P 2025, the Midwest's largest student-run tech conference.