

Sahil Kumar Singh

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EDUCATION

• New York University

Bachelor of Science in Computer Science

Minors in Mathematics and Finance

◦ Relevant Coursework:

- * **Computer Science & Mathematics:** Algorithms, Data Structures, Object-Oriented Programming, Software Engineering, Operating Systems, Computer Architecture, Discrete Mathematics, Data Analysis, Linear Algebra, Differential Equations, Open Source Software Development
- * **Finance & Economics:** Financial Accounting, Corporate Finance, IB & PE, Economic Foundations, Macroeconomics, Machine Learning in finance

Sep 2022 – Jun 2026

New York, NY

EXPERIENCE

• Fundamenta.ai [🌐]

Software Engineer Intern

Sep 2024 - Aug 2025

New York, New York

◦ Engineered scalable ETL pipelines with NodeJS and Python, processing 10M+ multi-source business records.

◦ Architected PostgreSQL schema with indexing and partitioning, enabling sub-second queries on millions of records.

◦ Developed a real-time dashboard and migrated infrastructure to bare-metal servers, reducing AWS costs by 50%.

• Vortyx [📊]

Summer Analyst Intern

July 2024 - Sep 2024

New York, New York

◦ Analyzed 11.3M SMB records via SQL and Excel thoroughly, uncovering that 80% were not acquisition-ready.

◦ Automated buy-side data pipelines and generated detailed reports on 700+ search funds, improving efficiency by 60%.

◦ Streamlined acquisition lead scoring using custom scripts, increasing decision accuracy and reducing review time.

• EZ Nyc Realty [🌐]

Web Developer Intern

Dec 2023 - Apr 2024

New York, New York

◦ Optimized front-end performance, cutting load time 15% and bounce rate 10% through code and asset refinements.

◦ Created a Compass-integrated CRM automating email/SMS outreach, improving client engagement and retention.

◦ Implemented sentiment analysis and tenant tools, boosting team productivity and workflow automation.

LEADERSHIP, AWARDS, & COMPETITIONS

• Lambda Chi Alpha – NYU Chapter

Treasurer & House Manager

Apr 2025 – Present

New York, NY

◦ Managed an annual five-figure budget and collected dues from members and alumni to sustain chapter operations.

◦ Presented concise weekly financial reports and implemented data-driven strategies to improve fiscal transparency.

◦ Negotiated lower insurance rates, created 0% interest payment plans, and ensured housing compliance with standards.

• Mathematics Competitions

◦ Qualified: AMC 10, SOF IMO, PRMO, RMO; Bronze Medalist, International Math Kangaroo.

◦ High Distinction, International Benchmark Test: Top percentile worldwide in math and mental ability.

◦ Ranked in the top 5% nationally in multiple regional and national mathematics olympics.

PROJECTS

• Smart Road Trip Planner | Python, OpenStreetMap, Osmium, Folium 🌐

Sep 2024 - Present

◦ Developed a cross-platform smart travel app in Swift that recommends stops using ETA, user mood, and group input.

◦ Integrated Google Maps API and OpenStreetMap for real-time navigation, EV charging, tolls, and weather alerts.

◦ Processed OSM data with Osmium to build custom JSON maps and AI trip journals for web and mobile platforms.

• Hybrid Derivatives Pricing Engine | C++, CMake, OpenMP 🚧

Sep 2024 - Present

◦ Built a high-performance C++ library to price European and exotic derivatives using Monte Carlo and PDE methods.

◦ Implemented variance-reduction techniques and finite-difference solvers including Crank-Nicolson and ADI.

◦ Optimized performance with OpenMP and GPU extensions, achieving major speed-ups on large-scale runs.

SKILLS

• Programming Languages:

Python, C++, Java, R, SQL

• Web & Frameworks:

HTML, CSS, JavaScript, PHP, Flask, MERN Stack, Puppeteer

• Tools & Platforms:

Git, Linux, AWS, JIRA, Anubis, Pandas, Matplotlib, Figma, MongoDB, MySQL, NLP, Data Structures