




# Sahil Kumar Singh

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## EDUCATION

- **New York University** Sep 2022 – Jun 2026  
New York, NY  
*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



## EXPERIENCE

- **Fundamenta.ai**  Sep 2024 - Aug 2025  
New York, New York  
*Software Engineer Intern*
  - 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**  July 2024 - Sep 2024  
New York, New York  
*Summer Analyst Intern*
  - 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**  Dec 2023 - Apr 2024  
New York, New York  
*Web Developer Intern*
  - 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** Apr 2025 – Present  
New York, NY  
*Treasurer & House Manager*
  - 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