BARAQ LIPSHITZ

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EDUCATION

New York University — August 2021 – May 2024
GPA 3.99/4.0 *Bachelor of Science in Computer Science* — Brooklyn, NY
SAT 1560/1600 (99.5th percentile)

Stanford University — May 2020 – September 2020
GPA 4.0/4.0 *Business & Innovation Summer Intensive Studies* — Palo Alto, CA
Relevant Coursework: Machine Learning (PyTorch), Robot/Computer Vision (OpenCV), Parallel Computing (CUDA, OpenMP, MPI), Algorithm Design & Analysis, Design and Implementation of Programming Languages (Haskell, Prolog, Forth), Data Structures & Algorithms (Python), Object Oriented Programming (C++), Operating Systems (C, x86), Comp. Architecture (x86, MIPS), Databases (SQL), Data Analysis, Project Management, Marketing

EXPERIENCE

NYU High Speed Research Network — September 2023 – Present
Team Lead, C++ Software Engineer (Paid) — New York, NY
- Leading a 3-person team to develop a high-performance event streaming platform in C++ (Corelink) and integrate it into NYU research infrastructure.

Forbes Media — June 2023 – August 2023
Technology Operations Intern (Paid) — New York, NY
- Primary deployment and frontend engineer for dynamic webpage to drive **$2.6M revenue** (est.). Built Argo pipeline, configured GCP hosting and Varnish routing logic. Collaborated with design team and built site with GatsbyJS, React, and SASS for mobile & desktop.
- Optimized Kubernetes infrastructure for AI and CMS supporting ~**2 billion** requests per month.
- Key contributor to full stack development of Next.js DevOps portal. Discovered a critical security vulnerability.
- Migrated 18 deployment pipelines to Argo. Improved in-house Kubernetes Argo Slack trigger in Go.

Payoneer — June 2022 – September 2022
Backend Software Engineer Intern (Paid) — New York, NY
- Built new microservice for payment notifications in .NET, C#, & MSSQL with load balancing and asynchronous request queue to replace synchronous SQL proc calls and **speed up dozens of APIs by ~736%**.
- Monitored microservices and fixed errors and bottlenecks with Dynatrace/Coralogix, load tested APIs with k6.
- Discovered microservice bug leading to recovery of $4,100 in past lost fees + projected $2,000/year fees recovered.

Lightning Tech — September 2017 – August 2023
Founder of Technology Consultation Business — Marin, CA
- Earned **$30,000+** profit serving **8 businesses** and **200+ individuals** with IT consulting & web design & SEO.

PROJECTS

Research for NYU Martin Luther King, Jr. Program | *NumPy, Playwright, Python, Typescript*
- Awarded $7,500 grant for proposing to research student bias against diverse NYU professors.
- Developed multithreaded web scraper w/ built-in process manager in Node.js & Playwright to scrape 5 years of university-wide course evaluation data for **772,542** instructor evaluations.
- Analyzed and visualized data with Numpy and Matplotlib **identifying significant evidence of discrimination** against professors of color at NYU. Crafted literature review and findings analysis.

Fitme | *Swift, Node.js, Firebase* (as seen on website)
- Wrote **11,171** lines of Swift for iOS social media ecommerce application and designed UI/UX.
- Wrote backend in node.JS: algorithm, direct messages, media storage, authentication.

TECHNICAL SKILLS

Programming Languages: C++, Python, C, Java, Swift, JavaScript, TypeScript, SQL, Haskell, Go (Golang), CSS, SASS, PHP, Intel x86 Assembly, MIPS Assembly, C#, Forth, Prolog, Verilog
Frameworks: PyTorch, OpenCV, MPI, OpenMP, CUDA, React, Kubernetes, Next.js, SwiftUI, ASP.NET, React Native
Tools: Google Cloud Platform, Git, K6, Dynatrace, Coralogix, Google Firebase, MongoDB, MSSQL Server, Gatsby, k9s, Stern, NumPy, Matplotlib, Next.js, Argo, Microsoft Azure DevOps, Jira, VSCode, Xcode
Languages: English (Native), Hebrew (Native)

ACTIVITIES & AWARDS

Awards: $1000 "Best Mobile/Web App" Marin Hack4Health 2017; Dean's List all semesters
Hobbies: Third degree black belt in Taekwondo, Wrestling, MMA, Certified Scuba Diver, Sailing, Skiing, CPR Certified