NIRVIK BARUAH

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EDUCATION

Stanford University *Expected Graduation: June 2023*
B.S. Computer Science; Minor in Classical Studies. **GPA 3.94**
Skills: Python, C/C++, Java, Spark, Rust, PHP, JS (React.js, Typescript), Docker, Git
Relevant Coursework: Compilers, Operating Systems, Databases, Algorithms, Data Structures, Linear Algebra, Probability

EXPERIENCE

Flatiron Health - Software Engineering Intern *June 2021 - September 2021*

- Rewrote processing pipelines for large-scale X-ray datasets using distributed computing frameworks.
- Reduced program runtimes by >95%, from 15 hours to 30 minutes.
- Apache Spark, Python, Hadoop, AWS EMR and S3, pyradiomics.

Stanford DAWN - Research Assistant (PI: Dr. Matei Zaharia) *June 2021 - Present*

- Investigating the effects of shard placement on distributed databases under OLAP workloads.
- Created novel shard placement algorithms which reduced query latencies by as much as 40% in comparison to standard shard placement strategies.
- Java, AWS EC2, Lucene, Solr.

Tensor Algebra Compiler - Research Assistant (PI: Dr. Fredrik Kjolstad) *March 2021 - Present*

- Creating compiler optimisations for complex tensor algebra expressions.
- Debugging C++ code generation issues and contributing to a large open-source codebase.

Byers Center for Biodesign - Technical Lead (PI: Dr. Lance Downing) *August 2020 - June 2021*

- Full-stack website developer for Care-It, a research initiative to improve end-of-life patient care through the creation of a secure online platform.
- Leading creation of web-app and running beta tests in the Santa Clara Hospital System.
- Node.js, React, Firebase, Typescript.

PROJECTS

TreeHacks
Tech Fellow for Tree Hacks, Stanford's largest annual hackathon. Built web platform to facilitate team formation and ideation for >1000 participants using MERN Stack (MongoDB, Express, React.js, Node.js). Position involved rebuilding large parts of our online infrastructure as we transition to a virtual hackathon for the first time due to COVID-19.

PoliSpectrum
Co-founded a company at an MIT startup incubator to solve political news bias. Served as the technical leader and built a website which automatically aggregated and summarised online news from political sources using extractive text summarisation algorithms. Used the LAMP stack and pitched the product to VCs in the Boston area.