

NICK YOUNG

EMAIL: NICHOLAS_YOUNG@BROWN.EDU | WEBSITE: N-YOUNG.ME | GITHUB: [N-YOUNG](https://github.com/N-YOUNG) | LINKEDIN: [IN/NDASHYOUNG](https://www.linkedin.com/in/NDASHYOUNG)

> EDUCATION

- **Brown University** – *ScB. in Mathematics and Computer Science [GPA: 3.96/4.00]* *Graduating May 2023*
 - > *Relevant coursework:* Massive Time Series Databases, Database Management Systems, Distributed Systems, Computer Networking, Programming Languages, Compilers, Graphics, Formal Methods, Probabilistic Methods, Number Theory.

> EXPERIENCE

- **Stripe** – *Software Engineering Intern (DocDB Fleet Management Team) – Seattle, WA* *June – August 2022*
 - > Designed and implemented a distributed Mongo **load simulation framework** in **Go**, supporting up to **100,000 writes/sec**.
 - > Wrote a custom **load generation engine** and supporting **user interface** in **React** to evaluate database performance.
 - > Spearheaded cross-team **database host management migration** in **Go**, deprecating hundreds of lines of legacy code.
- **Bloomberg LP** – *Software Engineering Intern (DevX Team) – New York, NY (Remote)* *June – August 2021*
 - > Deployed an **adaptive connection pool** in **Python**, reducing new connections by **98%** and lowering latency by **50%**.
 - > Used internal **telemetry** tools to track connection pool performance; exposed data through 4 unique **Grafana** dashboards.
 - > Delivered a **React UI** for users to interact with the DevX Policy Engine and improved **SonarQube** static analysis tooling.
- **Stochastic AI** – *Software Engineering Intern – Cambridge, MA (Remote)* *June – August 2020*
 - > Spearheaded the web team and set up **CI/CD** for the frontend and backend with **Github Actions**, **GCP**, and **Netlify**.
 - > Engineered the backend microservices architecture from scratch using **GraphQL**, **Docker**, **Rust**, **Python**, and **JavaScript**.
- **Stylindex** – *Full Stack Engineering Intern – Los Angeles, CA (Remote)* *June – August 2020*
 - > Developed an automated **GraphQL** emailing microservice using **Rust**, eradicating the need to manually send email alerts.
 - > Revamped the internal analytics system by tracking API activity with **Rust** and **Python** and building new charts in **React**.

> LEADERSHIP

- **Database Management Systems** – *Head Teaching Assistant* *Fall 2021*
 - > Revamped course to operate in **Go**. Wrote reference implementations, autograders, and handouts for 8 assignments on the following: **SQL**, **paging**, **hash tables**, **b+tree indices**, **query processing**, **query optimization**, **concurrency**, and **recovery**.
 - > Drafted conceptual assignments, coordinated the TA team, created the course website, and led all course logistics.
- **Adversarial Thinking in CS Education** – *Research Assistant* *Spring 2021*
 - > Published a paper on **adversarial thinking** in 100+ beginner computer science students in the **ACM ICER 2021** conference.
 - > Analyzed student responses to 300+ ethics assignments using **intercoder reliability** with Professor Shriram Krishnamurthi.
- **Full Stack at Brown** – *President* *Winter 2020 – Present*
 - > Led a web development club of **250+ members** and **50+ client-facing projects**. Oversaw operation of all project groups.
 - > Organized and conducted a web bootcamp to teach **HTML**, **CSS**, **JS**, **React**, and **SQL** to new members every semester.

> PROJECTS

- **TRustDB** [\[n-young/trustdb\]](https://github.com/n-young/trustdb) *April 2021*
 - > Highly performant **time-series database** written in **Rust**. Optimized for writing and querying of high-cardinality data.
 - > Pioneered **boolean logic-based query optimization** to accelerate conjunctive normal form queries by up to 1000%.
 - > Leveraged **finite-state transducer-based index compression** to keep log indexes both time- and space-efficient.
- **NetStack** [\[n-young/netstack\]](https://github.com/n-young/netstack) *April 2022*
 - > Minimum viable **RFC-compliant** implementation of **IP**, **TCP**, and **DNS** written in **Go** as a proof-of-concept.
 - > Supports **traceroute**, **route aggregation**, **recursive IP resolution**, and **route caching** on top of regular functionality.
- **Goo** [\[n-young/goo\]](https://github.com/n-young/goo) *May 2021*
 - > Performant and minimal **YAML**- and **Markdown**-based **static site generator** built in **Go** as a replacement to Hugo.
 - > Authored support for template partials, data injection, Markdown-to-HTML compilation, inline LaTeX, and joy;-like emojis.
- **OxySAT** [\[n-young/oxysat\]](https://github.com/n-young/oxysat) *March 2021*
 - > DPLL-powered **SAT solver** with custom heuristics to optimize satisfiability search, made in **Rust**.
 - > Tested using an automated oracle built in **Python**. Compatible as a backend for the **Forge** model-checking language.