NICK YOUNG

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> EDUCATION

- **Brown University** – *ScB. in Mathematics and Computer Science* [GPA: 3.95/4.00]   *Graduating May 2023*
  > *Relevant coursework:* Software Engineering, Computer Systems, Deep Learning, Database Management Systems, Programming Languages, Graphics, Formal Methods, Massive Time Series Databases, Probabilistic Methods in CS.

> EXPERIENCE

- **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 a **Grafana** dashboard.
  > Presented the pool implementation to the entire DevX department, composed of **200+ engineers**.

- **Stochastic AI** – *Software Engineering Intern – Cambridge, MA (Remote)*   *June – August 2020*
  > Designed and built a **React** webapp to deliver **hardware-accelerated topic modelling** for RNA sequencing data.
  > Managed the web team and set up **CI/CD** for the website, webapp, 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 assignments on the following: **SQL**, **paging**, **hash tables**, **b+tree indices**, **query processing**, **query optimization**, **concurrency**, and **recovery**.
  > Wrote conceptual assignments, managed the TA team, developed the course website, and led course logistics.

- **Adversarial Thinking in CS Education** – *Research Assistant*   *Spring 2021*
  > Published a paper on adversarial thinking in beginner computer science students in the **ACM ICER 2021** conference.
  > Analyzed student responses to ethics assignments using intercoder reliability with Professor Shriram Krishnamurthi.

- **Full Stack at Brown** – *President*   *Winter 2020 – Present*
  > Led a web development club of **175+ members** and **30+ 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]*   *April 2021*
  > Highly performant **time-series database** built in **Rust**. Supports high-cardinality writing and querying of timeseries data.
  > Leverages **boolean logic-based query optimization** and **FST index compression** to remain time- and space-efficient.

- **Goo** *[n-young/goo]*   *May 2021*
  > Performant and minimal **YAML**- and **Markdown**-based **static site generator** built in **Go**. Supports partials, data injection, inline math, and :joy:-like emojis. Used to build websites for multiple courses at Brown University, viewed by **300+ students**.

- **OxySAT** *[n-young/oxysat]*   *March 2021*
  > DPLL-powered **SAT solver** with custom heuristics to optimize satisfiability search, built in **Rust**, tested using an automated oracle built in **Python**. Compatible as a backend for the **Forge** model-checking language.

> SKILLS

- **Languages & Technologies** – Rust, Go, Python, Javascript, Java, C, C++, SQL, Docker, React, GraphQL, GCP, AWS, Alloy.
- **Design** – LaTeX, Photoshop, InDesign, Illustrator, Lightroom, Premiere, After Effects, SolidWorks.
- **Interests** – Photography, Writing, Graphic Design, Public Speaking, Japanese, Mechanical Keyboards, Badminton.