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)* *June – August 2021*
  > Developed 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.
- **Stochastic AI –** *Software Engineering Intern* *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* *June – August 2020*
  > Developed an automated **GraphQL** emailing microservice using **Rust**, replacing an old, manual email scheduler.
  > Revamped the internal analytics system by tracking API activity with **Rust** and **Python** and building new charts in **React**.

> TEACHING & RESEARCH

- **Adversarial Thinking in CS Education –** *Research Assistant* *Spring 2021*
  > Worked with Professor Shriram Krishnamurthi to investigate adversarial thinking in beginner computer science students.
  > Analyzed student responses to ethics assignments using intercoder reliability. **Published in ACM ICER 2021.**
- **Database Management Systems [CSCI 1270] –** *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 homework assignments, managed the TA team, developed the course website, and led course logistics.
- **Discrete Structures and Probability [CSCI 0220] –** *Teaching Assistant* *Summer 2021*
- **Software Engineering [CSCI 0320] –** *Teaching Assistant* *Spring 2021*
- **Accelerated Intro to CS [CSCI 0190] –** *Teaching Assistant* *Fall 2020*

> 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 simple **static site generator** built in **Go**. Site structure specified in **YAML**, then compiled to **HTML**.
  > Used to build websites for multiple computer science 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**. Compatiable 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 [portrait, travel, event], Gra, Blogging, Public Speaking, Japanese, Badminton.