

## EDUCATION

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- **Texas A&M University** College Station, TX  
*BS, Computer Science; 4.0/4.0, Summa Cum Laude* Aug 2020 - May 2024
- **Relevant Coursework:** Machine Learning, Parallel Computing, Analysis of Algorithms, Computer Graphics, Competitive Programming, Intro Operating Systems, Intro Software Engineering, Data Structures and Algorithms, Discrete Mathematics, Computer Architecture, Honors Research, Linear Algebra
- **Georgia Institute of Technology** Atlanta, GA  
*PhD, Computer Science; 4.0/4.0; Presidential Fellowship* Aug 2024 - May 2029

## EXPERIENCE

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- Graduate Research Assistant — **Georgia Institute of Technology** Aug 2024 - Present
  - Performed research in high performance computing, performance engineering, computer software systems, parallel algorithms, and data structures.
  - Collaborated on developing a parallel B-Skiplist using C++ and pthreads.
  - Designed experiments for evaluating parallel B-Skiplist performance with database operations in comparison to existing solutions..
- Research Intern — **Lawrence Livermore National Laboratory** May 2023 - Aug 2024
  - Developed a scalable U-Net machine learning benchmark for supercomputers with synthetically generated data using Python, PyTorch, MPI, and LBANN. (Paper in progress)
  - Designed a parallel 3D fractal dataset generator with Python, MPI, Pandas,
  - Developed performance visualisation tools for cross platform collaborative benchmarking using Python, Matplotlib, and Thicket.
  - Designed experiments for cross platform performance analysis using Google Ramble.
- Undergraduate Teaching Assistant — **Texas A&M University** Aug 2022 - Dec 2022
  - Led biweekly labs, graded assignments, and mentored students through projects for CSCE 331 Foundations of Software Engineering.
  - Taught software engineering tools, methodologies, and frameworks to  $\approx 120$  students.
- Systems Intern — **Fidelity Investments** May 2022 - Aug 2022
  - Developed interface and tools to facilitate an internal strategic idea incubator process.
  - Performed analysis on change ticket auto closure to determine viability, impacting 100000+ tickets a year.
- Peer Teacher — **Texas A&M University** May 2022 - Aug 2022
  - Led help and review sessions for computer science topics including data structures, algorithms, computer architecture, and operating systems.
  - Assisted with running course labs involving 100+ students.

## EXTRACURRICULARS

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- **Trialyze:** Application for simplifying the clinical trial process. Developed in collaboration with Houston Methodist Hospital as a part of the Sling Health Incubator using React and Nodejs.
- **Virtualoso:** Software for teaching piano to beginners by scanning sheet music and analyzing playing accuracy. Built with Rust, Javascript, Vuejs, Python, and Tensorflow.
- **Pin-It!:** Social media application built for Eanes ISD using Swift, Vuejs, and Firebase.

## SKILLS

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- **Languages:** Java, C++, C, Python, Rust, Lua, Go, ARM, x86, C#, Scheme, R, Haskell
- **Technologies:** CUDA, OpenMP, OpenGL, PyTorch, Tensorflow, MPI, .NET, POSIX, Linux, Google Cloud, Amazon Web Services, L<sup>A</sup>T<sub>E</sub>X, MongoDB, Postgres, Git, Docker, Bash, Spack