William 'Nat' Hill

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EDUCATION

Rice University   August 2021 – Expected May 2025

B.S. in Computer Science, Minor in Philosophy   *1560 SAT; 1520 PSAT; GPA: 3.67/4.00*

Relevant Coursework: Operating Systems, Algorithmic Robotics, Data Structures & Algorithms I & II, Grad Machine Learning, Computer Systems, Parallel Programming, Program Design, Abstract Algebra, Discrete Math, Honors Linear Algebra, Multivariable Calculus, Tech Product Management

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript/Typescript, Go, Swift, MATLAB, SQL, HTML/CSS, AutoDesk/CAD
Frameworks: React, Next.js, Bun/Node, Flask, MERN, Express.js, jQuery, TailwindCSS
Libraries/Developer Tools: AWS CDK, Docker, Lambda, EC2, S3, MongoDB, Firebase, REST, GraphQL, Git
Other Interests: Cycling, Backpacking, Keyboards, Coffee, Graphic Design, Figma, Film Photography

EXPERIENCE

RiceApps Vice President   August 2021 – Present

Rice University   *Houston, TX*

- Spearheaded six software projects with several **multi-million dollar** nonprofit clients.
- Coordinated and taught 100+ students in developer program, **launching full-stack software for social good.**
- Directed agile development with React/MERN/MongoDB, or Swift/Flutter/React Native for mobile projects.
- Initiated partnerships with Houston Ballet, Museum of Natural Science, and the Texas Heart Institute.

Software Engineer Intern   Expected May 2024 – August 2024

Gusto   *New York City, NY*

- Incoming software engineer intern at Gusto.
- Selected as one of 25 out of 15,000 applicants.

Software Development Intern   May 2023 – August 2023

Amazon Web Services   *Austin, TX*

- Interned with the AWS Supply Chain team that provides machine-learning powered insights to customers.
- Engineered secure internal automated query CLI application with Lambda, S3, Typescript, and the AWS CDK
- Facilitated **63% lower customer error response time** with operator data across multiple teams.

REU Research Intern   May 2022 – September 2022

Rice Networks Group, Rice University   *Houston, TX*

- Investigated autonomous, tetherless, aerial drone networks under Professor Edward Knightly.
- Devised a script in MATLAB / Python to analyze and process wireless signal data, **improving runtime by 10x.**
- Analyzed 30GB+ datasets in order to improve signal strength and AOA (Angle of Arrival) prediction.

PROJECTS

Nab 3D | *Typescript, Swift, React, Vite, Cloudflare, Axios, ThreeJS*   Feb 2024 – Feb 2024

- Led a student team to create a seamless video to 3D model platform.
- Created hosted backend API and photogrammetry model.
- Allowed users to implement 3D model on website in one line of code.
- Won **'best beginner hack'** at Stanford's TreeHacks 2024, the largest and most prestigious hackathon in the US.

Photo Date Estimation w/ Deep Learning | *PyTorch, Python, Jupyter*   April 2023 – May 2023

- Designed deep learning models leveraging zero-shot pre-trained models and CNNs to predict image dates.
- Surpassed human-level performance, with validation accuracy within three years on average with computer vision.
- Received the **highest grade in the class of graduate students.**

Concurrent Web Proxy | *C*   January 2023 – May 2023

- Developed a high-performance concurrent web proxy from scratch in C.
- Capable of simultaneous handling of hundreds of of client HTTP requests and images, alongside concurrent I/O.