

Ryan Nguyen

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EDUCATION

University of Virginia, Charlottesville, VA
Bachelors of Science, Computer Science

August 2023 – Present

- GPA: 3.95/4.0

University of Hawai'i at Manoa, Honolulu, HI
Undergraduate Engineering, Undeclared

August 2021 – December 2022

- GPA: 4.0/4.0

SKILLS

- | | |
|--------------------------|---|
| • Programming Languages | Python, C, Java, HTML, CSS, Javascript, Typescript, JSON, Rust |
| • Frameworks & Libraries | Node.js, React.js, Next.js, TensorFlow, PyTorch, NumPy, MongoDB |
| • Tools & Platforms | Linux, Jupyter Notebook, Anaconda, Git, Microsoft Azure, Vercel, Vim |
| • Miscellaneous | Fusion360, Internet of Things (IoT), Circuit Assembly, Microsoft Office |

EXPERIENCE

UVA I-S²EE Civil Engineering Lab Research Assistant, Charlottesville, VA

Research Assistant

September 2023 – Present

- Hired as research assistant to the UVA I-S²EE Lab (civil engineering); was selected from a competitive pool of first- and second-year undergraduates with only one open position
- Utilized **artificial intelligence** to simulate structural mechanics without conventional methods or equations
- Coauthored STRUCT-AR, an **augmented reality app** to perform infrastructure analysis & crack detection
- Learned finite element analysis via tools such as **Ansys**

UVA Engineering Bridge Program, Charlottesville, VA

Bridge Scholar

July 2023 – August 2023

- Attended UVA from July 12 – August 4 to take an engineering math class (APMA 1000); tutored peers to ensure everyone succeeded as a team and in a timely manner
- Built connections with relevant professors and faculty, learned from/interacted with elder students, explored the greater Charlottesville area to find new hobbies and interests

PROJECTS

Personal Resume Website (r-nguyen.com), Charlottesville, VA

Personal Project

August 2023 – Present

- Full stack web application with MongoDB Atlas deployment in the backend; several custom APIs
- Utilized **React.js** to build and the **Next.js** framework by **Vercel** to deploy
- Implemented and configured a dynamic space-themed background with **Three.js**

Augmented Reality App: STRUCT-AR, Charlottesville, VA

UVA I-S²EE Lab

September 2023 – Present

- Programmed the app base in **Unity** using built-in modules and the **Apple ARToolKit**
- Assisted to deploy a production build version to iOS via **Xcode**

Machine Learning Algorithm to Predict Rainfall, Honolulu, HI

Personal Project

August 2021 – May 2022

- Engineered a numerical weather prediction (NWP) neural network using **TensorFlow**, **PyTorch**, and **NumPy** in **Jupyter Notebook**
- Programmed a separate application to gather historical weather data via the NOAA and preprocess such data

Various 3D Printed Items

- Modeled and manufactured a functional cog assembly to demonstrate variable gear ratios in **Fusion360**
- Assisted to machine parts of a drivetrain differential using CNC mill, modeled in Fusion360