Ryan Nguyen

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EDUCATION

University of Virginia, Charlottesville, VA
Bachelors of Science, Computer Science *August 2023 – May 2026*

- GPA: 3.9/4.0

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 Infrastructure Simulation, Sensing and Evaluation Lab (I-S^{2}EE)
Research Assistant *September 2023 – Present*

- Hired as research assistant to the UVA I-S^{2}EE 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
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

Augmented Reality App: STRUCT-AR
UVA I-S^{2}EE 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**

Personal Resume Website (r-nguyen.com)
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**

Machine Learning Algorithm to Predict Rainfall
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