

# William Carter

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## TECHNICAL SKILLS

Over 8 years of programming experience across many disciplines, from full stack web to data science to game design.

**Programming Languages:** C, C++, C#, Rust, Python, Java, Javascript, HTML5, CSS

**Tools & Frameworks:** ReactJS, TailwindCSS, AngularJS, PyTorch, Pandas, Apache Spark, Docker, Git, Unity, Blender, Photoshop, Figma, MATLAB

## EXPERIENCE

### Microsoft / Nuance, Burlington MA — 05/23-07/23

*Software Engineer - Intern*

- Collaborated with an intern team of 9 to develop a user-centric **full-stack web application from scratch**, leveraging ReactJS, TailwindCSS, FastAPI, Docker, Terraform, and PostgreSQL. The app enables non-technical users to **deploy their own infrastructure through customizable templates** curated by the team.
- Spearheaded development of the Terraform Execution Engine, an internal Python library that intakes a given API payload, then **dynamically generates and executes Terraform commands** to deploy the desired infrastructure.
- Led a subgroup of interns to **design and develop an intuitive user interface**. Roadmapped and delegated tasks across the working group, while fostering a cohesive, collaborative environment.
- Worked with an **international team across 3 different time zones** using a follow-the-sun approach. Adopted Scrum methodologies for streamlined task allocation, effective communication, and sustained progress, culminating in a functional proof-of-concept by summer's end.

### Fidelity Investments, Smithfield RI — 06/22-08/22

*Database Engineer - Intern*

- Designed a **scalable generalized system** for handling all API requests and responses from various data sources, effectively replacing custom API scripts with easily adjustable 'data filter' configuration files.
- Contributions **reduced codebase size by 30%**, vastly increasing code legibility. Streamlined the implementation process for new API data, reducing potential multi-week developments to quick adjustments in config files, minimizing the need for extensive QA testing.

### Fidelity Investments, Merrimack NH — 06/21-08/21

*Full Stack Software Engineer - Intern*

- Built a **Machine Learning** and data processing pipeline in **Apache Spark**, which cleaned, reformatted, and analyzed client data in a fully automated fashion. This unlocked new potential in client prediction accuracy, preference management, and capital flow balance.
- Developed an improved web frontend for enterprise benefit clients using **Angular**, increasing data usability and streamlining the client experience. The most notable improvement was the implementation of a **backend caching system** for historical client data, which resulted in an up to **90% speed increase** for client page load tasks.

### Zelgor, Inc, Boston MA — 06/19-08/19

*Mobile Game Developer - Intern*

- Co-designed and developed Noobs in Space, Zelgor's first commercial release, generating **20,000 downloads in 48 hours** from the initial beta alone.

- Engineered a multitude of **core system features**, including gameplay systems, in-app purchases, and UI, as well as art and music content. Tech stack included Unity/C#, Blender, Photoshop, Git, Jira.
- Worked in an **Agile startup environment**, building new products from scratch, presenting vertical slices, and communicating with investors, causing **valuation to rise to \$4.8 million**.

## **Massachusetts Institute of Technology, Cambridge MA — 06/18-08/18**

*Researcher - Intern*

- Worked with MIT researchers to collect and analyze forearm **motor-neural data** for use in rehabilitative and **autonomous prosthetics**.
- Collected patient data using a robotic machine resistance system simulating a circular constraint, then used **MATLAB** to calculate and visualize tangential velocity and radial forces for use in new tests.

## **EDUCATION**

### **Rensselaer Polytechnic Institute, Troy, NY — 09/20-05/24**

*Bachelors of Science, Dual Major Computer Science (AI and Data) & Economics*