

Stuart Hunt

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https://stuarthunt.dev

SUMMARY

I am a software developer with years of diverse experience in full stack development, backend, frontend, web development, computer graphics, game engines, deep learning, and quantum computing. I am seeking a position in prototyping or product development (remote, or local in Raleigh/Durham/RTP) that will fuel my passion for innovation, and make effective use of my diverse technical background in software.

EDUCATION

- **MS - North Carolina State University** Raleigh, NC
Master of Computer Science; GPA: 4.00 December 2020
- **BS - North Carolina State University** Raleigh, NC
Bachelor of Science, Computer Science and Engineering, Minor in Physics; GPA: 4.00 – Valedictorian December 2019

EXPERIENCE

- **Qualcomm Technologies, Inc.** San Diego, CA
GPU Compiler Intern Summer of 2020
 - **DirectX:** Built a real time ray tracing graphics demo with DirectX 12, indirect lighting, shadows, and reflections
 - **Performance:** Conducted experiments to analyze the performance characteristics of DirectX ray tracing
- **SAS Institute Inc.** Cary, NC
Cognitive Computing Intern Summers of 2017, 2019
 - **Social Media Prediction:** Built text+image deep learning models that predict the number of likes a potential social media post will receive with 15% higher accuracy than a human
 - **Social Data Analysis:** Implemented data analysis tools for processing bulk visual and textual social media
 - **Sentiment Classifier:** Trained a multi-category sentiment classifier with BERT from Twitter emoji usage
 - **Quantum Computing:** Studied quantum computing and led a weekly textbook discussion community
 - **Deep Learning Calibration:** Designed a method to calibrate model probabilities to improve statistical accuracy*Year Round Cognitive Computing Intern* May 2016 - January 2017
- **Patent Lead Inventor:** Patented a deep learning model for classifying and locating overlapping patterns present in one-dimensional data for the purposes of generating natural language descriptions; Application #20180211153
Platform Deployment Intern Summers of 2014, 2015
 - **BOSH Extension:** Built a BOSH extension in Go that enables any hardware to mimic cloud architecture
 - **Distributed Log Analysis:** Implemented an AWS log collection & analysis tool with a web GUI for management
- **International Business Machines Corp. (IBM)** Raleigh, NC
Software Intern Summer of 2018
 - **Quantum Language:** Prototyped a quantum language parser that allowed for the use of Bra-Ket notation
 - **Quantum Information:** Completed an online MITx Quantum Information Science II course
 - **Data Dashboard:** Led an intern team to build a visual data analysis web app for the product development team

PROJECTS

- **Voxel Engine:** Architected & built a voxel game engine using Rust & WebGPU; 42x the render distance as Minecraft
- **Quantum Calculator:** A Bra-Ket notation based optimizing compiler built with MLIR and LLVM in C++
- **Distributed Ledger:** Collaborated on a Rust distributed ledger for use in a prototype peer-peer video game network
- **Reinforcement Learning:** Trained an AlphaGO based AI to play a strategic board game called Pentago with Python
- **GPU Iter:** Programmed a prototype Rust GPU compute library that focussed on usability and efficiency
- **Minecraft Plugins:** Helped develop the Java plugins for the book *Learn to Program with Minecraft Plugins*

SKILLS

- **Languages:** Rust – Java – C – C# – C++ – Go – Python – Ruby – Typescript/Javascript – HTML/CSS – Elixir
- **General Experience:** Git, Docker, Unix, Agile, Compilers, Deep Learning, Graphics, Quantum Computing

HONORS

- Graduated Valedictorian & Summa Cum Laude – Computer Science Honors – University Honors Program – Tau Beta Pi Honors Society – Phi Kappa Phi Honors Society – Accelerated Bachelor/Master Program – Consecutive Dean's List Recipient – Albright Entrepreneurs Village – Charles D. & Patricia D. Lamb Scholarship – Duke Energy Scholarship