Stuart Hunt

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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
- **Product Development**: Co-founded an LLC and launched a full stack jobs marketplace app & website with Elixir

Skills

- **Languages**: Rust – Elixir – Go – Python – Ruby – Typescript/Javascript – Java – C – C# – C++ – HTML/CSS
- **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