Jordan R. Horwich

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Professional Experience

Software Engineer, Google

January 2017 - Present

- Currently working on Google Knowledge Graph, a part of Google Search.
- Developed horizontal tooling and infrastructure widely used throughout Search teams for ingestion and maintenance of data in the Knowledge Graph.
- Designed a UI and algorithm for performing arbitrary topological transformations on unsanitized structured data for the purpose of schema mapping.

Software Engineer & First Employee, Nebulous Inc. December 2015 – December 2016

- Developed, marketed, and pitched Sia, a blockchain-based decentralized storage network.
- Improved Sia's initial blockchain download by a factor of 25,000.
- Secured the gateway that maintains Sia's decentralized peer-to-peer network to prevent against eclipse attacks.
- Finalized Sia's REST-like API in preparation for launching out of beta.

Software Engineer Intern, LinkedIn

Summer 2015

• Implemented company and school mini-profiles UI for LinkedIn's homepage using the Play Framework in Scala and Dust.js as well as permalink UI for feed updates.

Software Engineer Intern, Intentional Software

Spring 2015

- Designed and developed a natural user interface using the Microsoft Kinect to implement a gesture and virtual touch screen interface.
- Wrote a hand pose classifier in C++ using feature matching in OpenCV.
- Developed an N-dimensional implementation in C++ of UW's \$1 Recognizer for atomic gesture recognition with the Kinect.
- Architected a data transformation pipeline for processing input from motion sensing devices such as the Kinect, Leap Motion, and Myo.

Software Engineer Intern, Bloomberg L.P.

Summer 2014

• Designed and developed a Bloomberg Terminal application using C++ and service-oriented architecture on the back end and javascript on the front end. This tool was used to quickly fix a fatal error in the way market data from exchanges were stored. Similar errors previously took many hours to fix without my tool.

Software Engineer & Physics Consultant, Mimir Physics

Summer 2012 - 2013

- Co-author of a patent (pending application) for a hardware and software solution to account for variations in the spectra of multiple light sources in imaging applications.
- Developed an image processor in C++ for high color bit depth images that analyzed color data to create color images with an absolute color error of $\Delta E^* < 1$.

Skills

Languages: C++, Python, Bash > 8 years experience

 $\begin{array}{ll} \mbox{Go, C, Angular, Typescript} & > 5 \mbox{ years experience} \\ \mbox{SQL, Swift, Scala} & < 3 \mbox{ years experience} \end{array}$

Software: Mercurial, Git, MacOS, Linux

Other Projects

$\begin{tabular}{ll} \textbf{Offsite APFS Backup} & -\underline{\textbf{GitHub.com/VoidingWarranties/Offsite-APFS-Backup}} \end{tabular} \\$

A non-destructive incremental backup utility for cloning APFS snapshots.

${\bf MyoIntelligesture} \ - \underline{{\rm GitHub.com/VoidingWarranties/Myo-Intelligesture}}$

A library for processing raw data from the Thalmic Myo using a non-linear data pipeline.

MyoHome – GitHub.com/VoidingWarranties/Myo-Home

A natural user interface for home automation using the Thalmic Myo. Allows you to control home appliances by pointing at them and gesturing. Heavily uses MyoIntelligesture.

SignSight - GitHub.com/VoidingWarranties/SignSight

A unique computer vision approach to automatic traffic sign recognition.

Education

Rensselaer Polytechnic Institute, Troy, NY

2012 - 2015

81% of major requirements completed towards B.S., Computer Science GPA: 3.72

Courses

- Machine Learning
- Human-Computer Interaction Usability
- Algorithms

- Computer Graphics
- Natural Language Processing
- Data Structures