

education

B.A. in Computer Science – Boston University

September 2014 – December 2017

- Major GPA: **3.91** / Overall GPA: **3.67**
- Dean's List: **Fall 2014, Spring 2016, Fall 2016**

employment

Mocap Research Assistant – Texas State University

May 2018 – Present

- Created Python scripts to detect motion capture events among thousands of frames of data
- Assisted with the capture of biometric and motion data from test subjects using Qualisys Track Manager

Contractor – Alpec Engineering (Houston, TX)

January 2018 – Present

- Transcribed vertical pump models into Excel spreadsheets for lateral and torsional analysis
- Used SolidWorks software to measure dimensions in pump shaft assemblies

Course Assistant – Boston University

January 2015 – December 2017

- Taught six semesters in three intro CS classes, covering Python, Java, MySQL, and HTML
- Developed Python scripts to automate grading of finite state machines previously done by hand

projects

Pylet – [C++](#), [Qt](#), [Qt Designer](#)

www.chamathsd.me/pylet

- Python IDE for beginner programmers with a simplified interface and clear error reporting
- Used by Boston University students during the Summer 2016 semester for class assignments

Distance Field Raymarcher – [GLSL](#)

www.chamathsd.me/dfr

- Path tracing tool that can render photorealistic depictions of simple scenes in near real-time
- Combines the OpenGL pixel shader pipeline with traditional ray tracing techniques

HotSwap – [Android Studio](#), [Firebase](#), [Java](#), [Python](#), [Flask](#), [Scrum](#)

www.chamathsd.me/hotswap

- Android app that allows users to swap unused items and chat in real-time
- Integrated Facebook and Twitter authentication as well as the Stripe payment API
- Coordinated team efforts as a Scrum master during several development cycles

mycritic – [Python](#), [Django](#), [HTML5](#), [CSS](#), [SQLite](#)

www.chamathsd.me/mycritic

- Crowdsourced review aggregator which recommends media based on user similarity
- Used a Python and SQLite backend to index new user ratings in sub-linear time

WesterosCraftUnreal – [C++](#), [C](#)

www.chamathsd.me/wcu

- An Unreal Engine 4 plugin which dynamically streams Minecraft world data
- Utilized mutli-threading to asynchronously mesh voxel data without impacting frame rate

skills

Languages (Proficient): C++, Python, Java, SQL

Languages (Familiar): C, C#, GLSL, JavaScript, R, HTML, CSS

Operating Systems: Ubuntu / Debian Linux, Android, Windows

Frameworks: Qt, PyQt, Git, Travis CI, Android Studio, Unreal Engine 4, CMake, Firebase, Node.js