STEFAN A SIGURDSSON

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EDUCATION

Brown University **Providence, RI, USA**

Doctor of Philosophy in Neuroengineering 2015 – May 2020 Expected

- Advisor: Arto Nurmikko
- Thesis title: *"Developing a Method for Large-Scale Implantation of Microdevices into the Brain"*

University of Iceland **Reykjavik, Iceland**

Bachelor of Science in Physics 2012 – 2015

- Graduated with distinction; Grade: 9.59/10.00

WORK EXPERIENCE

Waseda University **Tokyo, Japan**

Student Researcher *(Matlab)* Jan. 2015 – May 2015

- Performed data analysis on raw voltage data collected from excited neuronal cell cultures.
- Identified key behaviors in neuronal firing patterns I was able to tie to specific ion-channels using ion-blockers.

University of Iceland **Reykjavik, Iceland**

Summer Research Intern *(C++)* May 2014 – Sep. 2014

- Added functionality for new types of molecular interactions to custom Monte Carlo plasma simulation software.
- Performed extensive simulations on a local supercomputing cluster for investigation of certain plasma phenomena.

PROJECTS

Net-Blob: Netcode Visualization Tool *(Python)* Nov. 2019 – Jan. 2020

- Implemented various networking algorithms relating to online multiplayer gaming within the context of an original networked multiplayer game (server-client model).
- The tool includes the ability to visualize these networking algorithms in action under various simulated network conditions. Gameplay experience is robust at up to 600 ms latency, 50% packet loss.
- Published a report on the performance and scaling of the multithreaded server.

BuJo: Habit Tracker (*Java)* Mar. 2019 – Jul. 2019

- Designed and developed a bullet journal habit tracker application for mobile devices in Android Studio.
- Implemented a database for storage of JSON encoded user information.

Automated Pick & Place Processing: Computer Vision (*Python)* Aug. 2018 – Oct. 2018

- Automated the sorting of silicon dies by Pick & Place machine using the OpenCV library for my PhD thesis work.

FPGA Programming: ARM32 Processor Implemented on a Cyclone II *(Verilog)* Sep. 2017 – Dec. 2017

- Developed a 5-stage pipelined ARM32 processor in Verilog for course ENGN1640 at Brown University.
- Achieved the highest processor frequency of any student for the year 2017.

TECHNICAL SKILLS

Languages: Proficient in Python; Familiar with C++, Java, Verilog, Matlab, HTML, SQL, Shell Script.

Tools/Frameworks: OpenCV, Android SDK, RESTful API, Django, JSON, Git.

Skills: Advanced Algorithms, OOD, Map Reduce, Data Analysis, Networking, Android Development.

HONORS & AWARDS

- 2nd Place in the Icelandic National High School Math Competition for the year 2012.
- Honorable Mention at the International Physics Olympiad in 2012.
- Awarded for highest graduating grade in the physical sciences at the University of Iceland for the year of 2015.
- Rank 180 out of 3300 contestants in Google's Coding Competition "Kickstart" round H – 2019.