ANDRE BODODEA

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EDUCATION

University of Edinburgh, Edinburgh, UK 2013 - 2017
Electronics and Software Engineering, BEng with Honours

- Developed skills in computer architecture, analogue & digital circuit design, operating systems, and object oriented design through courseworks and independent projects.
- Successfully completed the most challenging courses from both electronics and computer science such as Compiling Techniques, Computer Design, Computer Architecture, Digital System Design, Analogue Circuit Design, and Signal and Communication Systems.
- Received the Edinburgh Award for notable contributions to the student community.

Lowell High School, San Francisco, USA 2008 - 2013

- Graduated from a top-50 public high school with a GPA of 3.6, and an SAT score of 2100/2400.
- Founding member of high school's first robotics team, reached California Regional round of the FRC competition in our first year where we won the Chairman's Award.

LANGUAGES AND TECHNOLOGIES

- **Languages:** Java, C++, C, OpenCL, BASH, MIPS assembly, Verilog, some Python, some Android.
- **Technologies:** Git, Eclipse/Intellij/Android Studio, Vim, Linux, Target (PSPICE), Vivado LaTeX
- **Electronics experience:** Analogue and digital circuit design experience, circuit simulation using PSPICE, PCB layout design, extensive lab experience (oscilloscopes, signal generators, etc).

EXPERIENCE

Optimisation of Gaussian Process Regressions For Mobile GPUs Fall 2016 - Summer 2017
University Dissertation

- Developed a parallel implementation of Gaussian Process regression (a predictive learning technique) using parallel triangular solvers written in C++ and OpenCL, designed and optimised specifically for the ARM Mali GPU.
- Implemented and tested key optimisation techniques, specifically designed for the Mali hardware, across a range of critical metrics. These included vectorised operations, buffer map and copy operations, and various memory organisation schemes.
- Pinpointed critical bottlenecks due to the OpenCL 1.1 scheduling model that have thus far not been presenting in existing literature.

C Compiler Fall 2016 - Winter 2016

- Built a basic C compiler (including system calls, pointers, and structs) from scratch using Java.
- Includes all separate stages of compiling: Lexing, Parsing, Semantic and Type checking, and finally Assembly instruction generation.
- Obtained a much deeper understanding of how languages work under the hood, allowing for better reasoning about program runtimes and possible optimisations.

Wireless Temperature Measurement System Spring 2014 - Winter 2014

- Designed a circuit for a temperature transmitter/receiver system using D-type flip flops, op-amps, and RC charge-dischage circuits along with a variety of common integrated circuits.
- The transmitter side included temperature measurement circuit, voltage-to-frequency converter, modulator to prepare signal for transmission, and finally a transmitter using infrared LEDs.
- Gained a good understanding of circuit design techniques, as well as an ability to use analogue design concepts in practical applications.