Calvin Bulla

Personal Data

Place and Date of Birth:	Herne, Germany | 17 June 1994
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Github:	www.github.com/cabul

Education and Professional Experience

SEP 2015 - *Present*
Master in Innovation and Research in Informatics (120 ECTS)
Universidad Politècnica de Catalunya, Spain
Major: High Performance Computing
Current GPA: 9.1/10 (after 78 ECTS)
Research Student at Barcelona Supercomputing Center, Spain

SEP 2011 - JUL 2015
Undergraduate Degree in Computer Science (240 ECTS)
Universidad de Las Palmas de Gran Canaria, Spain
Thesis: "Analysis of Adaptive Prefetcher Configuration in Advanced Server-Class Processors" | Advisors: Pedro Medina, Marc Casas
GPA: 8.8/10

SEP - DEC 2015
Internship at PlayMedusa
Game and Web development

OCT 2011 - MAR 2014
Assistant at Edataunited S.L.
Mobile and Web development

JUN 2011
Offizielle Deutsche Schule Las Palmas, Spain

Notable Projects

UPC 2015
MIPS-ACE
Verilog implementation of a MIPS-like pipelined processor.
- Developed during the course "Processor Architecture".
- Supports most MIPS instructions and syscalls.
- Cache with pseudo LRU-replacement, 2-bit branch predictor.
- Implemented minimal OS with support for exceptions.
- Custom assembler written in Python.

ULPGC/BSC 2014
Bachelor Thesis
"Analysis of Adaptive Prefetcher Configuration in Advanced Server-Class Processors"

Design of a configurable parallel benchmark suite using the OmpSs programming model to stress the prefetcher capabilites of the IBM POWER7 processor.
- The benchmarks run on top of an adaptive runtime system that dynamically reconfigures prefetcher settings based on collected performance metrics.
- Instrumented the runtime system to analyze reconfiguration events.
- Developed in collaboration with Dr. Marc Casas and Dr. Miquel Moretó from the Barcelona Supercomputing Center (BSC).

PLAYMEDUSA **TriSquad**

2014 Directed a team consisting of 5 students assigned with the following tasks:

- Design and implementation of a 2-Player Strategy Game using Unity and C#.
- Design and implementation of a generic Backend/API to administrate the communication between asynchronous games, using Javascript, NodeJS/Express and MongoDB.

ULPGC **Radikal Chess**

2014 Implementation of a chess-like 2-Player Strategy Game and its AI in Java.

- Developed during the course "Fundamentals of Intelligent Systems".
- Tasks included analysis of common AI implementations for chess, design and implementation of an AI Algorithm, considering different Heuristics.
- Awarded for best implementation by professors of this course.

Conferences, Events, and Seminars

HPCA/PPoPP/CGO 2016	Volunteer
RoMoL Workshop 2016	Attendee/Volunteer
Ludum Dare	Design and implementation of a game in 48 hours
Hack for Good	Hackathon
Math. Olympics	Various participations up to 2007 Best place: Regional 1st (Coesfeld, Germany)

Languages

GERMAN:	Mothertongue
ENGLISH:	Fluent
SPANISH:	Fluent
FRENCH:	Basic Knowledge

Additional Information

PROGRAMMING LANGUAGES	Java, C#, C/C++ Javascript, Python, Perl Verilog, bash
COMPUTER SKILLS	Unix Environment Basic knowledge of embedded systems (Arduino) Web development (NodeJs, MongoDB, HTML, CSS) Mobile development (Android, Windows Phone)
RESEARCH INTERESTS	Profiling/Performance Analysis Runtime-aware Architectures Bioinformatics Workloads