

ANDRZEJ KOWALEWSKI

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in andrzej-kowalewski

akowal3

EDUCATION

Imperial College London

Electronic and Information Engineering, MEng

September 2017 – (June 2021) London, UK

- 2020 Dean's List for Academic Excellence for top 10% of students
- On track to obtain First Class Honours with year 1-3 average of 75%

Advanced Databases Machine Learning Computer Architecture
Embedded Systems Distributed Systems & Networks Robotics

Nicolaus Copernicus Bilingual High School

International Baccalaureate

September 2014 – May 2017 Warsaw, Poland

- Graduated in the top 10 of the cohort with overall score of 40/45

EXPERIENCE

SoC Modelling Engineer

Samsung Cambridge Solution Centre

March 2020 – September 2020 Cambridge, UK

- Developed Virtual Prototypes for hardware architecture exploration
- Self-proposed and developed the Python-based generator, which sped up and automated the process of assembling Virtual Prototypes
- Wrote an assembly boot code to bring up the Cortex R8 CPU model
- Thoroughly documented the development flow to aid the future work

Undergraduate Teaching Assistant

Imperial College London

January 2020 – March 2020 London, UK

- Supervised the 2nd year Introduction to Compiler Design laboratory
- Helped students discover the best compiler debugging techniques and design approaches when developing C-to-MIPS compiler in C++

Architecture and Digital Design Intern

Samsung Cambridge Solution Centre

July 2019 – September 2019 Cambridge, UK

- Responsible for translating the implementation of MAC accelerator hardware block into a behavioural model using Synopsys Virtualizer
- Wrote unit tests to verify the correctness of modelled hardware
- Observed an industry standard of the hardware development process
- Offered an opportunity to come back for the 6-month placement

IT Intern

KPMG

July 2018 - September 2018 Warsaw, Poland

- Configured computers for new users and serviced damaged laptops
- Gained practical experience of working in a large organization

SKILLS

Software Development

Python C++ F# SQL Bash
PyTorch Numpy Embedded Systems
ARM/MIPS assembly Git Perforce

Hardware Development

Platform Architect FPGAs Verilog
Virtualizer VivadoHLS SystemC

Languages

- English (Proficient - CPE, TOEFL)
- German (Intermediate - IB Diploma)
- Polish (Native)

PROJECTS

OurCode: functional programming lang.

- Implemented new functional language's run-time environment using F#

C-to-MIPS compiler

- Developed C compiler and C-to-Python translator using Flex, Yacc and C++
- Responsible for 'frontend' integration with an internal memory interface

SelfFlowers: plant care IoT device

- Constructed a self-watering plant pot, connected to the server and web-client

Bottle-finding robot

- Used a sonar sensor to locate the robot inside a maze and find the water bottles

MIPS processor simulator

PYNQ-PONG: arcade on Xilinx FPGA

Mastermind: board game solver in C++

FIRST Lego League: robotic competition

TRAINING

IBM System Design Workshop

June 2019 London, UK

- Lead team of 8 working on a case study
- Learned the best practices and methods for high-level design of large IT systems

INTERESTS

Tech news Lego Cycling Tennis