

Jay Piamjariyakul, MEng

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Education

University of Bristol

September 2017 - July 2021

Master of Engineering in Electrical & Electronic Engineering

1st Class Honours (74%)

Thesis title: "A novel make-up gain stage for the software-based Moog 4-pole audio filter" (Achieved 72%)

- Projects: loudness-restoring audio plugin based on ITU-R BS.1770, Rubik's Cube solving robot, FPGA peak byte generator/detector, DSP-based Goertzel algorithm implementation, embedded SoC/bridge design, LDPC coding system simulation, real-time autonomous robot programming
- Units: Digital/Analogue Electronics & Filters, Embedded Real-Time & VLSI System Designs, Networking Protocols & Applications, Mobile Communications, Sustainable Power Engineering, Audio & Image Processing
- Achieved 70% in First Year, 70% in Second Year, 74% in Third Year, 75% in Fourth Year

Strathallan School

September 2012 - June 2017

Perth, Scotland

- A-Levels: Mathematics, Physics, Computer Science (ABB respectively)
- 9 GCSEs including: A* in Mathematics and Computing, A in Triple Sciences, and B in English

Work Experiences

Arm Ltd

Cambridge, United Kingdom

Image Signal Processing (ISP) Hardware Verification Intern

June 2020 - September 2020

- Remotely communicated with fellow interns & associates within ISP division, developing an efficient workflow & timeframe to obtain results & discussions amidst the CoVID-19 pandemic.
- Collaborated with an external division within ARM to obtain metric processing scripts on Python, and developed a database system to store the parsed information & append additional parameters when required, with scalability & user experience considered.

University of Bristol

Bristol, United Kingdom

SCEEM OutReach Ambassador

November 2019 - August 2021

- Taught children & young adults (from the age of 8-18 years) of useful Engineering skills, introducing students to the concepts & discipline involved within the field.
- Hosted multiple workshops on STEM-related skills & subjects at school visits & cultural/science centres - such disciplines include electronics, programming, soldering, and circuitry.

CitiBlox Ltd

Bristol, United Kingdom

Leader of Electronics Division

October 2018 - October 2019

- Organised sub-teams for different sub-projects & assigned their team leaders & tasks, in liaison with the leaders of other divisions, and arranged meetings & conferences with team members to discuss ideas.
- Undertook certain executive decisions regarding prototyping, development timeslots, and components used.

Skills & Proficiencies

Technical Skillsets

- FPGA & embedded SoC development with SV/VHDL/C/C++ utilising ModelSim & Xilinx ISE

- Object-oriented programming concepts, general data structures & algorithms, version control with Git, CRUD systems, and web/software development in HTML/CSS, Python/JavaScript, and MATLAB
- Advanced electronics concepts, circuitries & operations, including System-on-Chip & bridge design, digital & analogue circuit design
- Communication system coding & design concepts (including mobile), and network protocols & principles
- Microcontroller programming in personal, internship & university projects, i.e. Arduino, Raspberry Pi, TI LaunchPad

Problem Solving & Creativity

- Developed a set of prototype methods for collecting coverage data from functional verification & image quality metrics given top-level specifications with Python & SV as part of my ARM internship scheme, and designed database methods for storing & querying the collected information.
- Designing & fabricating a Rubik's Cube puzzle-solving robot from minimal requirements, with concerns to resource efficiency, performance, design choices, longevity, and output verification.
- Designed a PNM to PGM conversion (and vice versa) in C & an FPGA byte generator/detector in VHDL from minimal specifications, and programmed a disease/population analysis program in Python.
- Designed & successfully operated an ultrasonic transducer circuit with minimal specifications.

Last updated: August 29, 2021