ARYAN GHOBADI

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UK Citizen, authorized to work in the United States

EDUCATION

IMPERIAL COLLEGE LONDON London, UK
Master (Integrated) of Engineering Expected June 2023

Major in Electronic and Information Engineering (EECS)
Predicted Grade: 2:1 (GPA: 3.70/4.0)
Relevant Modules: Software Engineering; Embedded Systems; Discrete Mathematics and Algorithms; Instruction Set Architectures and Compilers; Communications and Control Engineering, Signals and Systems
Societies and Activities: Judo Club, Committee Officer at Imperial Persian Society, Computing and Electronic Engineering Society.

TAPTON SCHOOL Sheffield, UK
High School: A Levels and GCSEs Sept 2012 – June 2019

A Levels: A*A*A in Further Mathematics, Mathematics and Physics, A in AS Chemistry.
Awards: British Science Association CREST Gold and Silver awards, UK Olympiad Senior Maths Challenge Gold, UK Chemistry Olympiad Silver award, Cambridge Chemistry Challenge Bronze award, South Yorkshire Police Inspiring Youth Award.

UNIVERSITY PROJECTS

IOT CONTROLLED MARS ROVER June 2021

- Developed a responsive, controllable rover complete with client/server connections, command validation using MQTT protocols, and UART for internal communication in a team of 5.
- Spearheaded the design of web server and control system on an ESP32 microcontroller using Arduino.
- Co-developed C and Verilog algorithms on an FPGA to implement computer vision for colour detection and Euclidean distance between objects.
- Developed an optimized algorithm for autonomous motion to allow autopilot motion and coordinate movement without user-intervention, as well as obstacle detection and evasive maneuver handling.
- Served as the team leader by providing technical direction and creating ideal transfer protocols, using strong verbal communication skills; diligently organized and hosted regular online meetings to debug and track progress.
- Created a 25K+ word technical report to document the development process and guide users, achieving a high 2:1 (68%).

C TO MIPS COMPILER March 2021

- Pair-programmed to implement and program a compiler system which converts advanced C programs containing embedded statements, classes, structure, recursive functions, and pointers, to MIPS Assembly.
- Produced and linked lexers, parsers, converters, and code generators into a streamlined system using C++, C, Flex, Bison, and Bash.
- Applied Agile methodology to code development and used a modular approach to compiler development, regular recording and monitoring the development process to ensure a smooth delivery, achieving a high 2:1 grade after an oral presentation.

MIPS PROCESSOR DESIGN December 2020

- Collaborated in a team to design, build, and test a CPU implementation of MIPS instruction set architecture.
- Implemented data and control path and cache memory using Avalon memory interface in Verilog.
- Led design of MIPS assembler and cross-compiler scripts in C, C++, Python, and test benches for robust design testing.
- Actively participated in and led remote group meetings, creating a formal datasheet as a team.
- Achieved a high First-Class grade (90%).

TECHNOLOGIES

PROGRAMMING LANGUAGES

- C++, C, Python, Java: Advanced
- Assembly (MIPS, ARM, x86), MATLAB, Verilog, Golang: Intermediate

TOOLS AND SKILLS

- OOP, Procedural programming, data management, Android Studio, processor system design, Arduino, IOT, control systems, computer architecture, FPGA, Git/GitHub, Machine Learning (scikit-learn, TensorFlow).

MISCELLANIOUS

Languages: English, Azerbaijani, Persian: Fluent | Russian, Turkish: Advanced | Dutch, French: Elementary
Interests: Near Eastern History, Music Production, Weightlifting, DIY, Backgammon, Language Learning