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
- Web Stack (HTML, CSS, JS), 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), Web Design

MISCELLANIOUS

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