BRIAN FORMENTO

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Skills

Computer science

Languages

English & Italian — Native

Education

MEng Electronic engineering with artificial intelligence (exchange student) 01/2019 – 05/2019
National University Of Singapore

Key Modules: Advanced topics in machine learning, Knowledge discovery methods in bioinformatics, neural networks, digital entrepreneurship.
Finalist YITU hackathon 2019 (won $300)

MEng Electronic engineering with artificial intelligence 09/2018 – 01/2019
Southampton University, United Kingdom

Key Modules: Computer Vision, Evolution of complexity. Group thesis: Using AI to remove aliasing and moiré from point cloud renders. Used a convolutional recurrent autoencoder

BEng electronic engineering with artificial intelligence (achieved 1st hons) 09/2015 – 07/2018
Southampton University, United Kingdom

Key Modules: Advanced programming, Machine Learning, Computational Biology, Computer Engineering, Control & Communications, Secure Systems

- Statistical learning: Experience with: LDA/QDA, logistic regression for classification, K-means clustering and genetic algorithms.
- Deep learning: Experience with: Tensorflow-GPU/Keras, Autoencoders, LSTMs, CNNs, Transfer learning and RNNs.
- Thesis: Computer vision system to detect people carrying guns. Using Keras, Tensorflow and Python while building my own synthetic dataset by modding a game in C#.
- Python for: Web app dev (Django), Web automation (Selenium). Web hosting: static files with AWS S3, app deployment on Heroku, Azure and Firebase.
- Designed the best performing transmitter/receiver simulation configuration in the first academic year with the use of MATLAB achieving an SNR of 37.29.

Education

- Keen participator in hackathons. ARM hackathon 2016, IEEExtream 2016, Hack the holidays 2016, ICHack2017, SotonHack 2017, IEEExtream 2017.

Experience

University's entrepreneurial activities

- Co-organised and co-run 5 speaker events and 2 workshops throughout the year 16/17.
- Scouted and fast-forwarded through an incubator 3 teams, one of which went on and won £25k from 3 investors in the 2017 Dragons Den competition.
- Pitched a start-up together with two all-star students at the UoS Dragons Den 2016.
- Pitched another start-up at the Take-Off 2016 challenge and won £3k.

Electronic engineering intern 07/2017 – 09/2017
Roke Manor Research, United Kingdom

- Working with Matlab, C and Python, for the implementation of a researched signal processing algorithm on an Ettus platform equipped with a Xilinx FPGA.
- Tested the implementation with off-air signals.
- Created links between Roke and the UoS cyber security club.

Electrical/electronic design engineer intern 07/2016 – 09/2016
L3 ASV, United Kingdom

- Project managed the complete re-haul of the central electrical distribution system found on the C target 9, one of ASV's most popular autonomous boats.
- Reduced material costs by £450 by designing a bespoke PCB to replace some COTS components, reducing manufacturing time by more than half and consequently further reducing labour costs by £1000 per item.
- Designing high-frequency solid state switching to replace outdated control mechanisms such as relays.
- Formed links between ASV unmanned development team and SotonHack, the biggest hackathon organization in Southampton, which lead to a £1250 sponsorship.
- Produced in detail test procedures for numerous control containers, halving testing time, complexity and therefore reducing costs.
- Organized for the founders of ASV to attend and present at one of Southampton university's entrepreneurial and business society events.
- Designed and 3D printed a cheap and easy to manufacture PCB enclosure on SolidWorks and presented my findings to board of Directors.