Shriram Sunder

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Personal Statement

I am Mechanical Engineer, well versed in Scientific Computing practices and have extensive experience in control techniques & optimisation algorithms. I also have over 18 months of experience in systems and chassis designs, designing BMS's for a hybrid motorcycle and precision manufacturing skills.

Skills

Tools	MATLAB, Mathematica
Com Protocols	CAN, RS232
Textual Languages	C, Embedded C, C#, C++ & Python
Graphical Languages	Simulink, LabVIEW, TestStand, VeriStand
Parallel Computing Directives	OpenMP, MPI, CUDA-C
Scripts	HTML5, JavaScript, CSS3, bash, PowerShell
CAD	SolidWorks

Education

Degree	**MEng - Mech. Engineering (Advanced Materials)**
Period	September 2011 — June 2015
Awards	**£1500 for exceptional academic performance**
Rank	***(2:1) Upper Second Class with Honours***
University	**University of Southampton** Southampton, UK

Experience

Employer	**University of Cambridge, Department of Chemistry**
Period	August 2015 — October 2015
Title	***System Design for Reaction Optimisation***
Desc:	Implementing algorithms in micro-flow fluid systems to optimise reaction speed quality and and automate systems. Involved optimisation in 2D and 3D spaces, with both local and global heuristic methods.
Skills	**NI Labview, Python, MatLab, Algorithm Design**

Employer	**University of Southampton + Schlumberger**
Period	June 2015 — September 2015
Title	***Control Development of a Downhole Drill String Experiment***
Desc:	Experimental testing with real oilfield components under simulated downhole drilling conditions. Involves data interpretation, and making recommendations to the industrial sponsor based on their findings.
Skills	**NI Labview, PID, Control theory**

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Employer	**University of Southampton, Department of Chemistry**
Period	July 2015 — September 2015 (Voluntary Internship)
Title	***Exploring dopant(Nb,Mo,Ta) properties induced in TCO's (SnO_2)***
Desc:	Introduced to Computational Material Science and Atomistic Simulations.Involved a significant amount of Bash Scripting and data accumulation/interpretation.
Skills	**CRYSTAL, Fortran, C, Python (Pandas, Scrapy), GnuPlot**

Dissertation

Title	**Hybrid Range Extending Motorcycle**
Year	Year 4
Desc.	Involved the building of a series hybrid (IC-Electric) system on a motorbike in order to provide a solution for a light medium range vehicle. Personal responsibilities included installing a BMS system for the first iteration of the bike, as well as design a GUI for the bike's simulator.
Skills	**Motorbike Simulator (Simulink), Simulator GUI and BMS system design**

Extra-Curricular Courses and Projects

Title	**LabView Core 1**
Duration	**June 2015 - July 2015**
Training	**LabView, Advanced Control systems**
Result	Developed fluency in LabVIEW and Control Algorithms. Also developed skills that help manipulate serial interface devices.

Project(s)	**Programming in Parallel MPI and MPP**
Duration	**January 2015 - June 2015**
Training	**C and C++ and Python (Pandas, GnuPlot)**
Result	Developed fundamental concepts of MPI and MPP interfaces, and gained exposure towards batch programming, benchmarking and differentiating

Project	**GPS-Quadcopter Integration**
Duration	**June 2015- present**
Training	Improved previous concept, by including a gps tracking, relaying data into a local server and plot the path using Google Maps API.
Result	Work still in progress

Project	**Southampton University Formula Student**
Duration	**September 2012- September 2014**
Training	**Small parts and precision parts manufacturing and extensive use of Solid-Works software.**
Result	Resulted in the first car to qualify in Formula Student 2013 from the university in 10 years, and gained significant experience in manufacturing small parts for the car.

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