JAKE MINNS

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EDUCATION

PhD in Materials Physics

Starting September 2016, University of Kent, Canterbury

Masters of Physics with a Foundation Year (MPhys)

2011-2016, University of Kent, Canterbury

First-Class Honours, Foundation Year Average Mark 79%

4th Year Modules:
Physics Research Project: 79%
Particle and Quantum Physics: 74%
Magnetism and Superconductivity: 91%
Topics in Functional Materials: 85%
Rocketry and Human Spaceflight: 79%

3rd Year Modules:
Physics Project: 73%
Physics Problem Solving: 72%
Relativity Optics and Maxwell's Equation: 62%
Thermal & Statistical Physics: 61%
Solid State Physics: 74%
Numerical & Computational Methods: 64%
Image Processing: 66%
Physical Science Research Planning: 75%

2nd Year Modules:
Quantum Physics: 72%
Electromagnetism And Optics: 78%
Physics Laboratory: 67%
Spacecraft Design And Operations: 82%
Medical Physics: 76%
Mathematical Techniques: 74%
Atomic & Nuclear Physics: 75%

1st Year Modules:
Mathematics: 79%
Computing Skills: 88%
Skills for Physicists: 85%
Introduction to Ballistics: 72%
Physics: 62%
Astrophysics, Space Science and Cosmology: 87%

4th Year Research Project

Synthesis of organic-inorganic halide perovskite and an investigation into the structure using the maximum-entropy-method to analyse neutron powder diffraction data.

3rd Year Research Project

Simulation to calculate the trajectories of electrons close to a magnetic monopole (Programming language: Fortran 95).

TECHNICAL SKILLS

Languages

C++, Fortran 95, HTML/CSS

Software

Matlab, Unity, ECDL qualification in Improving Productivity Using IT, Gnuplot, LaTeX, FullProf, SketchUp, Adobe Photoshop and Lightroom

Computer Projects

Solved a number of problems set by Project Euler. Built a number of simulations and a neural network that implements the backpropergation learning algorithm. A Tic Tac Toe competitive agent.

Electronics

Designed and constructed Arduino based projects including a thermostat, light following arm and basic games.

Mechanical Project

A reciprocating air engine constructed from wood that runs from a household vacuum.

PERSONAL SKILLS

Problem Solving

- Excellent proficiency in programming. Achieved 88% in a Fortran 95 based module. Soleved a number of mathematical and computational problems set by Project Euler.
- First principle problem solving has been proven by excellent academic achievements.

Communication

- Clear and concise written communication skills, demonstrated by an average mark of 78% across university laboratory reports.
- Strong verbal communication skills are evident from an average presentation mark of 86%.

Team Work

- Worked in a team of 3-4 skateboard instructors to produce a series of instructive skateboard lessons. Working together ensured the lessons remained organised and structured.

WORK EXPERIENCE

2012–2014 Labourer

Hipgrave Construction

- Instructions were quickly interpreted and the subsequent tasks were effectively and independently executed.
- Working as part of a team ensured the work site remained organised whilst maintaining efficiency in a fast moving environment.

2010–2013 Catering Assistant

Sports Space

- Communication skills were developed to build positive relationships with colleagues and ensure the needs of customers were met.
- As team leader the time spent serving customers was increased by efficient organisation of daily tasks between myself and 1-2 other employees on shift.

2009–2011 Skateboard Instructor

Swan Youth Center

- Clear and consistent communication was crucial to ensure the safety of young children throughout lessons.
- As part of a team of skateboard instructors a series of skateboard lessons were designed. Successful organisation and communication of the lesson activities resulted in the children developing new skills.

VOLUNTEERING

Swan Youth Project

Working with a local youth charity I represented youth on a committee involved in the design process of a multi-million pound extreme sports facility.

- Demonstrated team working skills in a professional environment.
- Communication within the team encouraged constructive feedback with the intention of developing the best solution.

July 18, 2016