Yohann Panthakee

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PERSONAL STATEMENT

A team-driven, passionate, and proactive MSc Motorsport Engineering student with strong capabilities in engineering design and numerical analysis with an interest in motorsport and Artificial Intelligence. A team leader who is eager to take on challenging projects such as being team lead to design the machine vision system for a fully autonomous race car for the Formula Student competition. Displaying a wide range of skills while demonstrating performance and dedication to get any task done on schedule while displaying proficient communication skills to communicate effectively with the team at all levels.

KEY ACHIEVEMENTS

- Achieved the highest level of “Expert” in SolidWorks software for Mechanical Design
- Selected to present at an IET event as part of the Formula Student AI team on current topics of AI & Neural Networks and electrification in motorsport
- Nominated to attend the GB Talent age group Water Polo trials in Cardiff in September 2012
- Completed a research design project for my A-Level Extended Project Qualification in 2017 titled: “Is There a Device that Generates Useful Power from the Waste Energy of a Car?”

EDUCATION

MSc Advanced Motorsport Engineering: Cranfield University (October 2021 – September 2022)

- **Modules:** Motorsport Electronics and Data Acquisition, Motorsport Vehicle Dynamics, Motorsport Aerodynamics, Computational Fluid Dynamics for Motorsport, Motorsport Powertrains, Business of Motorsport, Motorsport Structural Analysis, Composite Structures for Motorsport.
- **Group Design Project:** Endurance Racing Motorcycles for the Future
- **Individual Thesis**: Lap by Lap Analysis of the Racing Line for Driver Improvement Using FCN Semantic Segmentation Network and Computer Vision Techniques

BEng (Hons) Automotive Engineering (1st Class): Coventry University (September 2018 – May 2021)

- **Modules:** Manufacturing & Materials, Vehicle Systems, MATLAB and Simulink, Finite Element Analysis, Analytical Modelling, Automotive Engines and Vehicle Aerodynamics
- **Group Design Project:** The redesign of a front suspension system for a high-performance electric Sports Car with a detailed report including, industry research, FEA analysis, and CAD designs
- **Individual Thesis**: Cost function based path planning algorithm for the Formula Student AI competition

CAREER HISTORY

Formula Student Artificial Intelligence Competition (February 2021 – July 2021)

- Developer of the path planning algorithm used in the competition
- Co-authored all the presentations for the Static events
- Team expert for all mechanical and performance aspects of the car
- Elected to compete at Silverstone and was the Autonomous System Responsible (ASR) for responsibility in keeping the team safe when competing and testing the AI car

Formula Student Artificial Intelligence Competition (February 2020 – July 2020)

- Co-developed the Computer Vison system for the AI car using Python
- Authored and delivered the Autonomous Design presentation and contributed to the real-world AI and Simulation Development presentations for the Static events

Dassault Systems: Cambridge - Quality Assurance Intern (July 2019 – August 2019)

Dassault systems is a software development company specializing in design, manufacture, and project management

- Collaborated with the quality assurance team for Solidworks Electrical Products
- Formulated test plans, reporting, and validating bugs in Solidworks software
- Communicated and worked with other QA engineers in UK and US

Bentley Motors: Crewe – Whole Vehicle Engineering (August 2018)

Bentley Motors is a British manufacturer of luxury cars and has been a subsidiary of Volkswagen group since 1998

- Applied problem solving skills to the production line
- Gained practical experience as well as deepened my knowledge in additive manufacturing
- Presented a solution to improve time efficiency in the workshop

Ricardo: Shoreham-by-Sea – Whole Vehicle Simulation (July 2018)

Ricardo is a global engineering consultancy company operating over a wide range of engineering sectors

- Introduced to MATLAB/Simulink
- Created metal castings using PTC Creo Surface design
- Gained a deeper understanding of the principles for "Design for Manufacture"

Airbus: Filton – Engineering Structures (July 2017)

Airbus is a multinational aerospace corporation selling military and civil aerospace products

- Gained experience in metal additive manufacturing and “Design for Manufacture” concepts
- Learnt about low/high cycle fatigue testing of wing structures and components
- Achieved Silver level Industrial Cadet certification during work experience at Airbus

McLaren Racing: Woking (June 2017)

Founded in 1963, McLaren Racing is a British motorsport team competing in both F1 and IndyCar

- Participated in pre-race testing using the driver in the loop simulator
- Listened in to the post race debrief between the drivers and engineers
- Discussed my EPQ Research Project with the design engineers to receive constructive feedback

SKILLS, INTERESTS & EXTRACURRICULAR ACTIVITIES

- **Coding Skills:** Python and MATLAB/Simulink
- **Software Skills:** Confident user of the MS Office suite of products with a ECDL Certification in Advance spreadsheets. Good knowledge of ANSYS-Mechanical/Fluent, Altair HyperMesh, CATIA, SolidWorks, Fusion 360
- **Individual Interests:** Motorsport engineering more specifically prototype and endurance racing. Also keen on cooking and experimenting with new recipes
- **Sport:** Represented Camden Swiss Cottage swimming club at The Middlesex Championships and London Regionals from 2008-2011.
- **Memberships:** IMechE Student Affiliate Member
- **Charity:** Volunteered in multiple school swims raising money for charity
- **Projects:** Continuously developing my project portfolio with engineering related projects