# Paul Lavender-Jones

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In my penultimate year at the University of Bath studying for a master's degree in Mechanical Engineering. I have an avid interest in technology, specifically with multidisciplinary problems in biotechnology. Key skills include data processing & analysis, software development and mechanical design. Being driven and analytical, I am eager to learn new skills.

## Education

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|---|---|---|
| **University of Bath**, Somerset | **MEng** Hons Mechanical Engineering with Industrial Placement<br>*Grade: Predicted 1:1* | *2017 – 2022* |
| **Marlborough College**, Wiltshire | **A-Levels** *with an EPQ* on Natural Selection: **A***<br>*Maths:* **A*** *Further Maths:* **A** *Physics:* **A** *Economics:* ***B***<br>**GCSEs** *including Chinese* **(8A*, 2A, B)** | *2013 – 2017* |

## Projects

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|---|---|---|
| Efficiency for Access/Group Business Design Project. **Engineers without Borders/University of Bath** | • Project team lead designing a novel, affordable and efficient off-grid DC water purifier and kettle for use in Sub-Saharan Africa<br>• Detailed technical and commercial feasibility report to aid product design with potential to scale and UN sustainability goals in mind | *February 2020 – Ongoing* |
| Technology for Social Care Vertically Integrated Project, **University of Bath** | • Working towards an IoT integrated app that helps patients with the early stages of dementia<br>• Commercial sub-team leader; part of wider team across a range of disciplines from across university faculty and year groups | *September 2020 – Ongoing* |
| Portfolio Website/Blog, **Personal** | • Built an open-source website/blog to showcase my work using Svelte, Tailwind and Sanity.io<br>• paullj.me • github.com/paullj/paullavenderjones | *June 2020 – Ongoing* |
| LiDAR up-sampling algorithm development, **The Technology Partnership** | • Starting with market and academic research, created a prototype algorithm for up sampling LiDAR point clouds using Python<br>• Validated against real-world LiDAR data to find a vast improvement in performance compared to other ML techniques<br>• Presented work clearly and regularly to my team at work | *November 2019 – June 2020* |
| Technical Feasibility, **University of Bath** | • Group presentation exploring the physical, economic, safety and practical feasibility of a domestic anaerobic digester | *April 2019* |
| Syringe Machine Design, **University of Bath** | • Designed a syringe filter assembly machine for vaccine use in CAD<br>• Technical report was produced justifying each choice of bought and custom parts for maximum throughput and design for manufacture<br>• Failure mode and criticality analysis used to design for reliability | *February 2019 – April 2019* |

## Employment

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|---|---|---|
| The Technology Partnership, **Consultant (Placement)** | Worked in the Sensors and Devices group alongside a multidisciplinary team of scientists and engineers. Varied day-to-day project work; for example, market research, software development, data analysis, mechanical design and validation testing for multiple projects covering a broad spectrum of industries including LiDAR perception for use in autonomous driving, low-cost gas sensing and rapid molecular flu diagnostics for primary care. Software and firmware, I developed, is now in R&D lab use as part of spinout/start-up, LEX diagnostics. | *July 2019 – July 2020* |
| Den Creative/Elixirr Creative, **Backend Developer (Intern)** | Supported the creative team for a consultancy firm with project work. Developed an internal admin system with PHP, Laravel and Vue.js. | *July 2018 – September 2018* |

## Computing Skills

- Python *(Numpy, Pandas, SciKit, Jupyter, PyQt)*
- MATLAB *(& Simulink)*
- SQL
- Microsoft Office
- Autodesk Inventor
- Solidworks
- Adobe Creative Suite
- JavaScript/TypeScript
- HTML and CSS
- React/React Native
- Svelte
- C#
- C++
- Git
- Docker

## Language Proficiency

*Fluent* English | *Conversational* Japanese | *Beginner* Chinese (Mandarin)

## Other Interests

Running | Hockey | Photography | Cooking | Music