

Matthew Barty

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UX Engineer | Full-Stack Web Developer | Data Scientist

[Matthew.barty@outlook.com](mailto:Matthew.barty@outlook.com)

6 years of technical, cross-functional experience in product development in the HealthTech sector 🌟

I proudly research, design, develop, and test the world's most complex and wonderful systems - Including surgical robots, neurostimulation implants, satellite and comms, AI powered applications, and more!

Full Projects Portfolio:

📧 [mattbarty.com/projects](https://mattbarty.com/projects)

| Professional Experience

**UX Engineering Consultant & Full-Stack Developer** (HealthTech) 2022 – Present  
@ [The Technology Partnership \(TTP\)](#) | *World-Class Technology & Design Consultancy*

- Broad project leadership and individual contributor experience in UX/HF/Usability studies applied to neurostimulation implants, consumer diagnostics, intervention & imaging, surgical robotics (*and more*),
- Thought leader and developer for AI solutions & tools (research, prototyping, deployment, and advocacy),
- Presenter and panelist at Digital Health World Congress, London 2023 discussing UX, Usability, & AI

**Clinical Data Scientist** 2020 – 2022  
@ [CMR Surgical](#) | *Surgical Robotics Unicorn (startup experience, \$3bn valuation)*

- Designed data pipelines to retrieve, process, and report on real-world surgical data from robot system,
- Conducted research, statistical analysis, and data validation on real-world surgical data,
- Responsible for data visualization, and general internal/external communication of data insights

**Human Factors Engineer** 2018 – 2020  
@ [CMR Surgical](#) | *as above ~*

- Designed, executed and reported on 30+ usability studies (formative and summative) with surgeons, nurses, and other HCPs for complex surgical system,
- Executed successful full-system validation study of the Versius surgical robotics system,
- Responsible for risk management documentation and designed complex algorithms to ensure consistency, accuracy, and traceability between critical design documents.

| Technical Skills

UX Engineering	Project management, HCI design, Interaction design, Research study design, Quant & Qual research, Contextual inquiry, Questionnaire design
UX Design	Adobe Photoshop, Illustrator, InDesign, Premiere, Figma
Frontend Dev	JavaScript, TypeScript, ReactJS, NextJS, TailwindCSS, HTML, CSS
Backend Dev.	NodeJS, Express.js, RESTful API Development (FastAPI), AWS S3 & CloudFront, Git
Data Science (AI/ML)	Python, TensorFlow, Deep Learning (CNN & RNN), Computer Vision, NLP, LLMOps, Systems Design, Matplotlib, SQL, R, Statistical Analysis, Numpy, Scikit-Learn

| Education

MSt   Healthcare Data	University of Cambridge, UK	2020 – 2022
BSc   UX, Ergonomics, & Human Factors	Loughborough University, UK	2014 – 2018