

Full stack software engineer - enjoys building physical systems simulations and signal processing algorithms.

Programming

- Actively exploring new technologies – proven track record for creative problem solving.
- Experience of wider programming tools and design principles - Git, Agile, SOLID, DRY.
- Full-stack web developer.
- University educated in MATLAB, C++ and C# for digital signal processing applications.
- **Languages:** Python - Javascript - Linux/UNIX – Django - HTML - CSS - Bootstrap – MATLAB - C++ - C# - Arduino.
- **Recent projects:** [physics simulations](#), [autonomous agents](#), piano tuning, [compression algorithm](#), [puzzle games](#), [genetic algorithms](#), machine learning.

Online Courses

- [Nature of code – Processing Foundation](#) (Oct 2018 - Present)
- [Python and Django Full Stack Web Developer Bootcamp – Udemy](#) (Sep 2019 – Present)

Electronics and Acoustics

- Knowledge of DSP techniques – Fourier transform, convolution, FFR, IIR and adaptive filter design.
- Use of oscilloscope, voltmeter, frequency response measurements.
- Troubleshooting and repair of electronic circuits.

Engineering - CNC Machining

- Programming, setting and running lathes to produce complex parts for three engineering companies.
- Learned a solid methodical approach to programing machines to solve complex problems.
- Developed strong 3D spatial visualisation skills.
- Written and set 50+ programs for widely differing parts from scratch.
- Use of precision measurement instruments.
- Familiar with machining operations milling, turning, knurling, broaching, tapping and drilling.

Employment History

Eldon Tools and Engineering <b>CNC Programmer setter</b> Feb 2019 – May 2019	Programming and setting Citizen CNC Lathes – sub contracting.
Nov 2016 – Jul 2018	Rock climbing guide and Ski instructor in Canada.
Nov 2013 – Nov 2016	Rock climbing instructor in the UK at a local gym.
Dinex Clamps LTD <b>CNC Programmer Setter</b> Apr 2016 - Oct 2016	Programming and setting Citizen CNC sliding head lathes – automotive industry – large batches.
Totally Wicked Engineering <b>CNC Programmer Setter</b> Nov 2013 - Apr 2016	Programming and setting Citizen CNC lathes – electronic cigarettes – prototyping and manufacture.. Additional duties: parts washing, polishing and soldering.
Dinex Clamps LTD <b>Production operative</b> Jul 2012 - Nov 2013	Setting and operating pneumatic presses and spot welders.
HHB Communications <b>Electronic Service Engineer</b> 2010 - 2011	Diagnosing electronic faults of pro-audio equipment. Worked as part of a busy London team.

Education

<u>BSc (Hons) Acoustics -University of Salford</u> MODULES STUDIED INCLUDE: Electronics, Mathematics (calculus, statistics and applied), Programming, Computer Simulation, Digital Signal Processing, Acoustics and Electroacoustics, Speech Technology, Room Acoustics. Achieved Second Class Honours degree.	(2007 - 2012)
<u>St Mary's College, Blackburn</u> A LEVELS- Mathematics (B) Physics (B) Music Technology (B) Electronics A/S (A)	(2004 - 2007)
<u>Ribblesdale High School Technology College, Clitheroe</u> 10 GCSEs A* - B	(1999 - 2004)

**Interests – climbing** - An active mountaineer and rock climber. The sport improved my skills in goal setting and personal organization, risk assessment and dealing with developing situations. Worked with children and adults in instructor roles, indoors and out.

**Other interests** - Music and playing musical instruments including guitar, keyboard and accordion. Mountain biking, running, skiing, reading science fiction and non-fiction.