Oliver Bailey

PROFILE

A veteran electronics engineer of 20+ years' experience, keen to branch into practical application of statistics and data science to bring value to data.

SKILLS

Computing & Programming: Scripting in R, Python, Bash. Embedded Linux system builds. C, C++ , C# familiarity. HTML, CSS, JavaScript. Verilog for CPLDs and FPGAs. Revision control, e.g. git, SVN.

Statistics and Data Science: Tidying and exploring data. Transforming and model building. Visualization using modern graphing tools (ggplot2, plotly, etc.). Report writing from markdown and HTML source.

Product Development: Full product lifecycle development from concept, design, test and volume manufacture. Good troubleshooting skills, e.g. for EMC / EMI issues,

Electronics: Analogue & digital design, RF expertise to low GHz, PCB layout, test and support of mass-production electronic devices.

RECENT STUDY & TRAINING

- "**Machine Learning**" - 11 week course by Andrew Ng from Stanford University, including topics Supervised & Unsupervised Learning Algorithms including Linear & Logistic Regression, PCA, K-Means, SVMs, Neural Networks, Recommender Systems.
  (https://coursera.org/verify/W596DX9SECKU)
- "**Data science Specialization**" – 40 week set of 10 courses from Johns Hopkins University, including topics R programming, Data Analysis, Reproducible Research, Inference, Regression, Practical Machine Learning, Data Product Development, Capstone Project (Text Prediction App).
  (https://www.coursera.org/account/accomplishments/specialization/certificate/55MJ7A5842XS)
- "**Bayesian Statistics: From Concept to Data Analysis**"- 4 week course from University of California, including topics Frequentist vs Bayesian Inference, Prior and Posterior Predictive Distributions, Conjugate Priors, Applications with Binomial, Poisson and Exponential Distributions.
  (https://coursera.org/verify/ABR8YFWW37BJ)
- "**Practical Time Series Analysis**" – 6 week course from State University (NYC), topics included Stationarity, Autocovariance, Autocorrelation (ACF and PACF) functions, Random Walks, ARMA, ARIMA, SARIMA modelling, Backward Shift Operator, Yule-Walker estimation, Holt-Winters and Exponential Smoothing, Forecasting.
  (https://coursera.org/verify/HZZCT6EV3T98)
- "**Probability & Statistics: *To p or not to p?***" – 6 week course from University of London, including topics Descriptive Stats, Visualization, Sampling Theory, CLT, p-Values, Effect Size, Hypothesis Testing, Decision Tree Analysis, Linear Programming, Simulation.
  (https://coursera.org/verify/99LYH47FY72K)

EMPLOYMENT

Displaydata Ltd., Bracknell Senior Hardware Engineer May 2017 – present

Electronics design engineer for Electronic Shelf Labels (ESLs) and other related hardware

- Circuit & PCB design for new generation of ESLs.
- High-volume production support, legacy product support, component selection and assessment.
- Research for future technologies (e.g. energy-harvesting, 5GHz ISM), Product Approvals (CE, FCC, ISED,…) responsibility.

Surface Technology International (STI) Ltd., Hook Senior Hardware Engineer June 2016 – May 2017
Working to develop hardware for customers, from concept through design to production for low to high volume designs.

- Responsible for new designs from customer hardware requirements.
- Organising EMC and other approvals for each design.
- Working with the Firmware team to develop software for design, if required.

DTC (formerly Cobham TCS), Basingstoke Senior Hardware Engineer Dec. 2012 – June 2016
Worked to develop hardware from concept through design to production for low volume, complex surveillance equipment.

- Responsible for specifying requirements and development of out-sourced modules
- Designing in-house circuits and modules, including high power RF amplifiers using Doherty and Class AB stages
- Co-operating with PCB vendors, manufacturers, component suppliers, software houses.

Nokia, Ulm, Germany Senior RF Engineer April 2012 – Dec. 2012
Worked on a RF development project for a new Nokia low-cost mobile phone platform.

- Responsibility for receiver development & collaboration with component suppliers
- RF simulation to improve receiver performance

Unfortunately, it was announced on 14th June 2012 that Nokia was to close the entire R&D site in Ulm.

Vertu, Church Crookham, Hampshire Senior RF Engineer, R&D July 2002 – April 2012
Over the years at Vertu, my role included:

- EMC troubleshooting of radiated emissions problems with handsets and accessories.
- Integration of NFC antennas & Wireless Charging system into mobile handsets
- Responsible for RF PCB layout, EMC and RF integration and testing on Vertu mobile handset projects.

Ericsson Mobile (Ltd.), Basingstoke RF Engineer, R&D Sept. 1999 – July 2002
After graduation, I worked on various mobile handset projects, from concept to mass production. This included:

- Measurement of RF filters, switches, amplifiers etc. to ensure compliance to specification
- Solving of RF problems including radiated and conducted harmonics, output power versus time failures, matching of receiver paths (SAW-LNA-Mixer)…

EDUCATION

1995-1999	University of York, UK. Masters degree in Engineering: (MEng) "Electronic Engineering". Achieved a First with Honours. Courses included Telecommunications, Optronics, Avionics, Microprocessor Design, Power Electronics, Solid State Electronics.
-1995	Queen Katherine School, Kendal, Cumbria, UK. A-level: Mathematics.(B), Physics.(A), Chemistry.(A)

INTERESTS & OTHER SKILLS

I enjoy playing guitar, and teaching others who are keen to learn too. To keep active, I regularly play racquet sports, as well as going mountain biking and hiking. To relax, I enjoy cracking a cryptic crossword and am a keen chess player.

ONLINE GitHub: https://github.com/threefeetdeep Web: http://threefeetdeep.co.uk/