ALEX DOWSETT

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📍 Location: Essex, UK

Aspiring Software Engineer | Recent Electronic Engineering Graduate

Enthusiastic graduate with a 2:1 Bachelor of Engineering in Electronic Engineering with Computer Systems from the University of Surrey. Passionate about leveraging seven years of Python and SQL experience to develop data-driven, innovative solutions. Adept at leading software teams, solving complex problems, and delivering impactful projects.

EDUCATION

University of Surrey | *2020 – 2024*

- **Bachelor of Engineering in Electronic Engineering with Computer Systems**
- Achieved: Second Class Honours (Upper Division) *[2:1]*
- Final Year Project:
  - *"Data Analytics Software for Agricultural VOC Analysis"*
  - Created bespoke software using Python and SQL to process millions of data points from RoboScientific VOC sensors analysing emissions from pigs in an animal farm.
  - Cleaned, normalized, and standardized data; applied machine learning algorithms to detect patterns and predict potential health issues.
  - Resulted in an accurate predictive tool for identifying issues based on interventions (e.g., dietary changes, temperature adjustments, and vaccinations). The software's potential and foundation are now being further developed and refined by a PhD student at the University of Surrey

Mayflower High School and Sixth Form | *2012 – 2019*

- The top performing Mathematics and Computer Science student in GCSE and A-Level.
- A-Level: Maths (A*), Computer Science (A), Physics (B)
- GCSEs: Maths (9), English Lit. (7), English Lang. (4), Computer Science (A*) and six others (A*-C)
- UKMT Awards: Best in School, Silver Award, Multiple Bronze Awards.

WORK AND VOLUNTEERING EXPERIENCE

Software Lead – "Vivant" Group Project | *Final Year 2023*

- Led the software development for a Raspberry Pi-based smart doorbell integrating fingerprint and facial recognition features.
- Developed the backend systems using Python, SQL, and PHP, creating functionalities for biometric unlocking and GUI-based video communication.
- Assigned tasks to team members, ensured timely delivery of software milestones, and collaborated with the hardware lead to align software and hardware integration.

Billericay IT Solutions & Web Services | IT Support | *2018*

- Diagnosed and resolved customer IT issues, achieving a 90% first-attempt success rate.
- Built and maintained websites improving user experience for small business clients.
- Introduced and independently managed mobile phone repairs, expanding the company's service offerings.

Freelance Tutoring | Maths and Physics Tutor | *2019*

- Mentored nine GCSE and A-Level students in mathematics and physics, leading to an average grade improvement.

- Developed tailored lesson plans to address individual learning needs, enhancing understanding of complex concepts.

TECHNICAL SKILLS

- **Programming Languages**: Python & SQL (7 years, advanced), JavaScript, Next.js, React, PHP, HTML, CSS (Intermediate),
- **Software & Tools**: Git, Visual Studio Code, WebStorm, Microsoft Office Suite
- **Frameworks & Concepts**: Machine Learning (scikit-learn), Data Cleaning & Normalization, Biometric Systems, Database Development & Maintenance, GUI Development, Object-Oriented Programming (OOP)

KEY PROJECTS

Portfolio Website (2025) | dowsett.dev
- Designed and built a personal portfolio website to showcase projects, skills, and achievements.
- Technologies Used: Next.js, React, JavaScript, HTML, CSS.

Data Analytics Software for VOC Analysis (2023-2024)
- Developed software to analyse and predict health conditions in pigs using data from RoboScientific sensors.
- Leveraged Python and SQL to process and normalize millions of data points and applied machine learning to uncover trends from environmental interventions.

Vivant Smart Doorbell (2023)
- Created a smart doorbell system with a GUI, facial recognition and fingerprint authentication using Python & SQL, and PHP to create an API to allow communication with iOS app.
- Designed a user-friendly GUI for video communication with visitors and integrated it with a Raspberry Pi for hardware interfacing.
- Gained hands-on experience with Linux systems for development, deployment, and system optimization.

Hairdresser Booking System (2018–2019)
- Built a bespoke booking system using Python, Tkinter, and SQL for a local hairdresser.
- Features included a login system, appointment scheduling, and payment tracking.

ADDITIONAL SKILLS

- Strong leadership demonstrated by coordinating software tasks for a 7-member group project.
- Skilled in debugging, troubleshooting, and integrating complex systems.
- Proficient in data-driven problem-solving and machine learning applications.
- Managing a family member's financial estate as Power of Attorney, gaining hands-on experience in inheritance tax, tax planning, and investment strategies and optimizing tax efficiency.

HOBBIES AND INTERESTS

- Exploring emerging technologies and building personal coding projects.
- Playing the piano and staying active with squash.

REFERENCES

Available upon request.