James Borgars

MEng, BSc Computer Science (Industrial) – The University of Leeds

Address: Haughton, Staffordshire, ST18 9DL
Telephone: 07973 844094
Email: james@borga.rs
LinkedIn: https://www.linkedin.com/in/james-borgars/

Personal Profile

I am a driven, collaborative, and bright individual who is looking for new challenges after having completed two internships within networks and tech, having left a lasting positive impact by facilitating automation and process improvement. As a student with upcoming publications in the fields of artificial intelligence, deep learning, and surgical data science, I strive to work on cutting edge technology and create novel solutions to complex problems.

Employment

2024 **BT Business**
Technical Designer Intern

Ten-week internship, focusing on **SD-WAN** and **Contact Centre** solutions design, having learned about **Palo Alto** and **Genesys Cloud** solutions extensively. Presented a Request for Proposal to re-engineer a mock company's network estate, designed to an estimated 600 employees with solutions for Network, Voice, and Contact Centre. Received a graduate scheme offer.

2022 – 2023 **Virgin Media O2**
Core Transmission Design Intern

Twelve-month internship with extension as a Core Network Design Engineer, designing connectivity solutions for both VMO2 and its customers over the fixed network having designed solutions with contract values of over £1,500,000. Created First of Type documentation for new network technologies and provided **Quality Assurance** of the designs of other Design Engineers within the team. **Subject Matter Expert** on new topology schematics and processes whilst also facilitating **automation and process improvement** opportunities by creating **VBA-based solutions**. Received a graduate scheme offer.

Publications

A.K. Abbas et al. Forthcoming. **Midline-Constrained Loss in the Anatomical Landmark Segmentation of 3D Liver Models**. *Medical Imaging Understanding and Analysis*. **29**.

J. Borgars et al. Forthcoming. **Intraoperative Segmentation through Deep Learning and Mask Post-processing in Laparoscopic Liver Surgery**. *Medical Imaging Understanding and Analysis*. **29**.

Education

2020 – Present **University of Leeds, School of Computer Science**
MEng, BSc Computer Science (Industrial)

Module Name	%	Module Name	%
Computer Processors	100	Introduction to Discrete Mathematics	91
Procedural Programming	100	Formal Languages & Finite Automata	91
Programming for the Web	99	Programming Project	89
Computer Architecture	98	Object Oriented Programming	88
Databases	93	Artificial Intelligence	87

First Class with honours. Bachelor's dissertation graded as a First Class. Full academic transcript available.

2012 – 2019 **Haberdashers' Adams**
A Level and GCSE Student

Course Title	Grade	Course Title	Grade
A Level Mathematics	A*	A Level French	B
A Level Computer Science	A	AS Level Further Mathematics	A

Attained 10 GCSEs at grade A* or A (or equivalent) including Biology, Chemistry, Computer Science, Physics, English Language, English Literature and Mathematics.

Academic Projects

Summer 2021 – Nintendo DS Buffer Overflow: An independent project for my own enjoyment, discovered a buffer overflow present within a Nintendo DS game that led to arbitrary code execution on an emulator. Also created a write-up explaining the exploit discovery process from start to finish. Code was made open source.

University Year 2 – Unix-like shell: Created a Unix-like shell for the Xv6 Operating System, implemented advanced features such as handling multiple pipes and redirection in one given command.

University Year 2 – Electric Scooter hire system: Led a team of seven people in the creation of a MERN stack website and multi-platform application (utilising Electron) for an electric scooter hire system as part of a university group project. My role involved leading both the backend and frontend teams, preparing meeting notes, as well as being the largest contributor to the codebase.

University Year 3 – Bachelor's Dissertation: Dissertation in the area of Distributed Systems (Network Function Virtualisation and Network Slicing). Provided a greedy heuristic algorithm to solve the VNF-FGE problem in a latency-aware fashion. Awarded a First Class grade of 75%.

University Year 4 – Master's Dissertation: Group project focusing on machine-assisted surgery in the liver. Achieved best-in-class results on chosen dataset, leading to two published papers on segmentation of intraoperative images and preoperative meshes. A final product of a pipeline involving overlaying tumour locations using the segmentation models and projection (3D-2D registration), and Augmented Reality headset functionality.

Technical Skills

Python (Versions 2 and 3)	**C and C++**	**Web Development/Node.js**
Linux and Bash scripting	**Excel and VBA**	**Git and Jira**
DBMS (SQLite, MongoDB)	**AI/Deep Learning (PyTorch)**	**Corporate and Core Networks**

Key Employability Skills

- Good **team working** skills – experienced in a **technology industry** working environment: worked in conjunction with engineers in a **support** role for complex projects as part of my internship, worked on both sides of a QA process, and employment experience working under **Agile** methodologies. Collaborated in dissertations and academic papers.
- **Adaptability** – able to **react to change** when tackling a problem so a task can be completed in an efficient and effective manner and **handle changing priorities**, **objectives**, and **demands**.
- **Outgoing** and **engaging** – can **communicate effectively** with both clients and colleagues.
- **Lifelong Learner** – driven to further knowledge whether in the workplace or outside.
- **IT** skills – experienced with both Linux and Windows operating systems and office software packages for both.
- **Mathematical** ability – studied mathematics at a high level from a school through to university level.
- **Languages:** a Native **English** speaker, having spoken **French** from a young age (Upper Intermediate Level).