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## Education

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**University College London (UCL)**, London (2021 – 2025; second year):

MEng Computer Science, on track for **First** (ongoing).

**First-year exam average: 81%**

- **Software Development** – Extensive knowledge of Java and object-oriented programming. Employ **test-driven development** & work to write clean code. Employed research skills and gradient based multi-variable hyper parameter optimisation to develop an automatic Tetris player. Achieved an average **score of 25,000**.
- **Leadership** – Developed a program to measure and visualise performance of abstract code. Responsible for dividing work and integrating modules. Coordination with teammates and **making compromises** essential to complete project. Resulting tool used in later project yielded a **12x performance improvement**.
- **Project Management** – Working in a team to develop a complex IoT project to remotely monitor machinery. I was responsible for coordinating the team and **overcoming the conflicts we encountered**. The final project was able to **integrate 7 discrete layers developed by separate sub-teams** successfully.

**Hyndland Secondary School** (2015 – 2021):

- Advanced Highers: 4 A; Mathematics, Mathematics of Mechanics, Physics, Computing, NPA Cyber Security

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## Technical Experience

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**Technologies explored beyond curriculum:**

- **Networks**– Extensive knowledge of networks & distributed systems. Familiar with TCP/IP, as well as the OSI model. Researched **traffic engineering** methods, such as *Fibbing*, *NDP* or Software defined networks (*SDN*).
- **Distributed Systems** – Research about approaches in *sync* and *async* networks, the *CAP principle* and *CRDTs*. I have developed models for some of these systems, available on GitHub, through my website.
- **Digital Operations** – Interest in DevOps/SRE. Learned about **SLI/SLO/SLAs**, monitoring, incident response and **error budgets**. Skills in networking and **Linux**. Interest in maintenance of distributed services.
- **Security** – Familiar with security incident response and network security (IDS/IPSS, SOCs). Done labs on ImmersiveLabs, earning **4000 points**, the **5<sup>th</sup> highest at UCL**. Achieved **96% in GFACT beta**.
- **Algorithms** – Programming practice, Leetcode challenges and miscellaneous algorithms available on GitHub.

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## Work Experience

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**Entrepreneurial Projects** – Spare Time development work, London (March 2022 – June 2022)

Developing Tools to deploy in hospitals to manage beds. Replacing old and inefficient phone systems.

- **Market Understanding** – Consulting with technologists and medics to develop an effective and viable solution. Faced security concerns when handling client data, implemented measures which satisfied stakeholders.
- **Communication** – Worked on a casual basis with other developers and business specialists to deliver a solution.

**London Strategic Consulting** – Digital Consultant, London (January to March 2022):

Digital and strategy consulting for a client wishing to improve their web presence and move into a new market.

- **Client relations** – Worked with the client to produce a set of recommendations to improve their new web marketplace. Based on empirical measurements, research, and analysis, I developed a set of recommendations which should **improve page performance by 50% in the short-term and as much as 90% in the long term**.
- **Communication** – Constant communication within the digital team to ensure that work was divided effectively, and approach was unified, as well as communicating with the strategy team to take a combined approach, using market research knowledge, and understanding of the client's customer base to evaluate their web site.
- **Technical Recommendations** – Developed a long-term security and maintenance strategy, based around improving monitoring and developing performance targets and performing regular audits and tabletop exercises.

**T-Systems MMS** – Intern, Dresden (July 2019):

Intern-run software project to develop an online social platform for other students.

- **Efficient Teamwork** – Responsible for user authentication and security. This involved working on all components of the project, I worked with colleagues to determine which security measures would be effective and practical to implement, without damaging system operation. Experience with hashing, salting and encryption.

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## Other notable skills

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- Languages – Native **English** ability and near native **German** ability, work experience in UK and Germany
- **Vice President** at **UCL Hiking** club & experienced Scottish hill navigator. **DofE Gold award**.