YASER SORGUCU

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PROFILE

Third-year Electrical and Electronic Engineering student at the University of Bristol, on track for a 2:1. The part of the degree I enjoy most is the hands-on side: FPGA design, embedded C, and building my own Arduino projects at home. I've been course rep for two years running, and I helped set up BriSS, a new student silicon and hardware group at Bristol, as one of a founding team of five. I'm now its vice president. I've also spent two summers working airside for Jet2, where doing things properly under time pressure is the whole job. I'm looking for a summer 2027 internship in electronics or electrical engineering.

EDUCATION

MEng Electrical and Electronic Engineering | University of Bristol — Sept 2024 to Jun 2028 (expected)

- 2:1 so far, averaging 65% across Years 1 and 2.
- Year 3 modules include Embedded Systems (programming a TI C2000 microcontroller in C) and Power Electronics, Machines and Drives (simulating PWM inverters and analysing their harmonics in Simulink).

Worcester Sixth Form College | Worcester — Sept 2022 to Jul 2024

- A-levels: Mathematics (A*), Further Mathematics (B), Physics (B). EPQ (A) on the design, performance and reliability of electric aircraft.
- Gold in the UK Mathematics Challenge, qualifying for the follow-on round, and took part in the national Ritangle competition.
- One week's work experience at Neoperl, covering CAD design, manufacturing and quality control.

TECHNICAL SKILLS

- **Digital design:** VHDL, FPGA development
- **Programming:** C for embedded systems (TI C2000, Code Composer Studio), Arduino, Raspberry Pi Pico, Python for data analysis, MATLAB
- **Design and simulation:** Simulink, AWR, Fusion 360, 3D printing
- **In the lab:** building and prototyping circuits, testing and measurement
- **Languages:** Turkish (native), English (fluent)

ENGINEERING PROJECTS

FPGA peak detector | team project, University of Bristol

- Worked in a team to design a peak detector in VHDL and run it on an FPGA.
- Built the data processor, working closely with one other team member.
- The finished system reads a stream of values from 000 to 999, picks out the highest, and displays it alongside the three samples before and after.

Measuring the Young's modulus of steel | University of Bristol

- Built a microphone and op-amp circuit around a Raspberry Pi Pico to record a steel ruler vibrating, sampling at 5 kHz.
- Ran nine trials across three ruler lengths, then used Python to pull the natural frequency out of each recording by counting zero crossings.
- Calculated a Young's modulus of 165 GPa, about 83% of the textbook value for steel.
- Traced the gap to background noise and one inconsistent set of trials, and set out how to fix both in my report.

Fan duct for heat dissipation | team project, University of Bristol

- Designed and 3D-printed a fan duct with my team to improve heat dissipation, then helped with the testing, measurements and final report.

Arduino builds | personal projects

- Built a music player with LEDs that flash in time with the track, a countdown prototype for an aircraft anti-collision system, and a roulette-style game.
- Teaching myself Fusion 360 so I can design and print custom parts for these builds.

LEADERSHIP AND SOCIETIES

Vice President and founding team member, BriSS Ongoing

University of Bristol student silicon and hardware group, due to become an official society after December

- One of five students who took a teammate's idea and built it into a working group. We agreed between us that I'd take on the vice president role.
- Set up our first big project, a Tiny Tapeout, where 61 students have signed up to design a real chip together.
- Split the chip into six parts and organised six mixed-ability groups, each owning one part.
- Currently running the first sessions and getting groups to agree early on how their designs share the chip's 24 pins.

Course Representative, Electrical and Electronic Engineering | University of Bristol Year 2 and Year 3 (current)

- Represent a cohort of around 110 students for the second year running, collecting feedback from other students and raising it with staff.

WORK EXPERIENCE

Jet2.com, Bristol Airport | Ramp Agent, previously Baggage Agent May to Sept 2025, Jun to Sept 2026

- Came back for a second season with more responsibility, moving up from baggage handling to headset and marshalling duties.
- Talked directly to the flight deck over the headset during aircraft departures.
- Marshalled aircraft in line with airside safety procedures.
- Set up the ramp and positioned ground equipment so turnarounds ran safely and on time.
- In my first season, sorted baggage into the right trolleys for each flight and moved it safely between the baggage hall and the aircraft.

Sainsbury's, Worcester | Customer Service Apr 2023 to Sept 2024, Christmas 2025

- Worked across bakery, tills, self-checkout, online orders and stock reductions while studying for my A-levels.
- Carried out inventory checks, completed shrinkage and waste reports, and looked into stock discrepancies when the numbers didn't add up.
- Trained new colleagues and helped them settle in.
- Came back for Christmas 2025 to cover several departments over the busiest weeks of the year.

INTERESTS

- Reading about science, data and human behaviour, including Everybody Lies and Quantum Mechanics: The Theoretical Minimum.
- Simulation games, especially Cities: Skylines.
- Walking, travelling and getting outdoors to explore new places.