

ANDREJ MAJER

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PROFILE

Biomedical Electronics undergraduate at SETU Carlow, consistently top of class (Year 1 average 88.75%). Hands-on coursework experience in analogue signal conditioning (four-stage EMG acquisition pipeline), embedded C and AVR assembly, and the full PCB lifecycle from Proteus simulation through to surface-mount assembly (Larson Scanner). Practical software work in Python and C across self-hosted automation projects, complemented by microbiology lab experience that spans the electronics-biology boundary. Seeking a Semester 2 work placement (starting January 2027) in medical device development, electronics, or embedded systems.

PROJECTS

EMG Muscle-Activity Monitoring System

Year 2 · Medical Devices and Instrumentation · Group project

- Designed and built a four-stage EMG acquisition system: instrumentation amplifier, 5 to 450 Hz band-pass filter, non-inverting output amplifier, and Arduino ADC sampling.
- Addressed common-mode rejection, baseline drift, and EMG-band noise across the conditioning chain.
- Delivered a working end-to-end pipeline displaying live EMG signal readings on an on-board LCD.

Variable-Speed Larson Scanner

Year 1 · Prototyping

- Simulated the design in Proteus, then prototyped on stripboard (with debug iteration) and breadboard before designing through-hole and surface-mount PCBs.
- Assembled, soldered, and debugged each board iteration, taking the design from simulation to manufactured hardware across two board types.
- Demonstrated the full PCB lifecycle in a single deliverable.

Pulse Oximeter and Heart-Rate Monitor

Year 1 · Prototyping · Group project

- Built a pulse-oximetry and heart-rate measurement system on breadboard, with biomedical sensor interfacing and embedded firmware experimentation.
- Designed a CAD enclosure to take the prototype from electronics to product form.

Air-Quality Monitor on ATmega328P

Year 2 · Embedded Systems 1 · Group project

- Built an air-quality monitoring system in embedded C on the ATmega328P (AVR) microcontroller.
- Interfaced sensor and peripheral hardware, drawing on AVR assembly fundamentals from the same module.

Social Media Monitoring and Reporting Platform

2026 · Personal Project

Python, Linux VPS

- Built a tool that tracks a set of Instagram accounts and turns their activity into an automatic monthly engagement report, running unattended on a Linux server using Docker, a database (Supabase), and external APIs.

WORK EXPERIENCE

Founder and Developer

2026 – Present

Intropix · Apify Store (self-employed)

Build and sell two Instagram data extraction tools on the Apify marketplace, billed per event and profitable in their first month across 139 users. Handle supplier pricing, customer support and feature requests, GDPR compliance.

Technical QA and Model Evaluation	2023 – Present
Outlier AI · Telus Digital · Invisible Technologies (freelance, remote)	
Evaluated code, mathematical, and natural-language model outputs against written rubrics and guidelines across three platforms, including logical-reasoning evaluation, A/B comparisons, search-suggestion ranking for Apple Music, and transcription / NLP annotation. Coordinated with QA leads and project managers in fast-turnaround cycles.	
Manual QA Tester	2020 – Present
UTest · Testbirds (freelance, remote)	
Exploratory, manual functional, and edge-case testing of web and mobile applications across platform marketplaces, with focus on user-path prediction, ease-of-use evaluation, and structured bug reporting against acceptance criteria.	
Administrative and Research Assistant	2019 – 2024
Agape Slovensko (part-time, Bratislava)	
Produced quick-turn research summaries on events, venues, and competition activity, and maintained internal guidelines, FAQs, and documentation during policy changes.	

LEADERSHIP AND ACTIVITIES

Class Representative	2019 – Present
SETU Carlow (2 years) · Bilíkova Bilingual Gymnasium, Bratislava (5 years) · earlier secondary school (2 years)	
Elected by peers across three schools for nine consecutive years, currently in my second year as class representative at SETU Carlow. At secondary level, served as an active Student Parliament member contributing proposals and organising school events.	
Nite Party · Founder and Event Organiser	2022 – 2024
Founded and ran a recurring student-event series drawing 600+ attendees per event. Organised venues, negotiated supplier contracts (DJs, sound, camera crews), and ran promotion through Instagram ads, flyers, and direct ticket sales.	

EDUCATION

South East Technological University, Carlow, Ireland	2024 – May 2028 (expected)
BEng (Honours) in Biomedical Electronics	
Year 1 credit-weighted average 88.75%. Highest-grade modules: Prototyping (95), Electrical and Electronic Fundamentals (94), Mathematics and Computer Applications 2 (94), Computer Programming (92).	
Bilíkova Bilingual Gymnasium, Bratislava, Slovakia	2019 – 2024
English-Slovak bilingual programme. Leaving Certificate equivalent in English, Mathematics, and IT.	

ADDITIONAL INFORMATION

Programming and Software: Python (strong), C (competent), AVR assembly (basic), Docker (basic), n8n (proficient), Supabase (basic), REST API integration (basic), SQL (basic), HTML/CSS (basic), GitHub (basic)	
Engineering Tools: Proteus (strong), CAD (basic); Cadence and MATLAB (familiarity)	
Lab Skills: microbiology lab work including cGMP and H&S awareness, aseptic technique, media preparation, staining (Gram, endospore, capsular), biofilm Crystal Violet assay, viable counts	
QA and Manual Testing: web and mobile manual testing, exploratory and edge-case methodology, UI/UX validation	
Productivity: MS Office, Canva, Markdown, video editing (iMovie, Synthesia, Animaker)	
Languages: Slovak (native), English (native), Hungarian (proficient), Czech (proficient)	