Abdelrahman Elmorsi

Control and Automation Engineering Student | Web Developer | Junior Pentester

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PROFILE

Motivated third-year Control and Automation Engineering student with hands-on experience in web development, cybersecurity, and student leadership. Proven ability to deliver full-stack projects, organize technical events, and lead multicultural communities. Actively seeking internship opportunities in embedded systems, web engineering, or cybersecurity to apply technical knowledge in real-world environments.

EXPERIENCE

Secretary General, *YTÜ International Students Club*
05/2024 – 06/2025

- Served a diverse community of **450+ members** and **50+ volunteers** from over **40 countries**, across **9 different communities**.
- Developed and deployed the club's official website (uokytu.com.tr 🔗) using Astro and Tailwind CSS.
- Managed communication between members, university departments, and partner organizations.
- Managed records, documents, and internal correspondence.

Technical Programs Volunteer, *Ibtikar Assembly*
07/2024 – 05/2025

- Contributed to **Scientific**, **Logistics**, and **Public Relations** teams in organizing CTFs, workshops, and conferences.
- Developed 10+ CTF challenges (Web, OSINT, Pwn) using OWASP Juice Shop and CTFd.
- Coordinated logistics across venues and ensured timely execution of events with 100+ attendees.
- Prepared educational content and presentations for STEM-based workshops.

EDUCATION

Yıldız Technical University (YTÜ),
Bachelor's in Control and Automation Engineering
10/2023 – present

PROJECTS

EMG Robot Arm Companion App, *React Native, Python*

- Researched and prototyped a companion app for an EMG-controlled robot arm, combining Python backend logic with React Native frontend for cross-platform usability.
- Engineered seamless integration between EMG signal processing modules and the app interface, enabling intuitive real-time control and consistent user experience across mobile devices.

International Students Club Website, *Astro*

- Built and launched the official website for YTÜ's International Students Club (uokytu.com.tr 🔗 ✉), improving club visibility and communication with students via a clean UI using Astro framework.
- Formulated an interactive content management system for the International Students Club website, enabling streamlined event updates and enhancing member engagement through modular web components.

Robot Arm CV Controller, *Python, C++*

- Engineered a computer vision-based robot arm controller utilizing Python, enabling accurate real-time manipulation and seamless object tracking for advanced automation tasks.
- Refined object identification algorithms within the robot arm control system, enhancing precision and robustness for dynamic automation environments.

SKILLS

Frontend Development
HTML5, CSS3, Tailwind CSS, JavaScript, UI Design, Astro, React, React Native

Cloud / DevOps
Cloudflare, Linux, Cloudflare Workers, Git, CI/CD

AI & Automation
OpenAI API, Prompt Engineering, RAG Systems, LangChain, Whisper

Backend & APIs
Node.js, Express.js, PostgreSQL, Python, REST APIs

Engineering Tools
MATLAB, Simulink, Arduino, AutoCAD, MPLab X, Proteus, Simscape

Cybersecurity & Networking
Cisco Packet Tracer, OSPF, VLANs, NAT, DHCP, CDP/LLDP, Network Topology Design, Metasploit Framework, nmap, Wireshark, Kali Linux

COMPETITIONS

TEKNOFEST Barrier-Free Living 2025
Backend Developer – Reached Finalists (Ongoing Project)
Working on a Chrome extension that improves video accessibility for deaf and hard-of-hearing users.
- Responsible for backend development using **Express.js**
- Extracts video audio and converts it to text via **OpenAI Whisper**
- Translates text into Sign Language instructions
- Animates a 3D avatar to perform sign language in real time

Skylab CTF 2025
6th Place

TEKNOFEST Cybersecurity Hackmasters 2024
Semi-Finals

Skylab CTF 2024
9th Place