Abdelrahman Elmorsi

Istanbul, Türkiye | +90 531 738 8724 | contact@abduelmorsi.com.tr
linkedin.com/in/abduelmorsi | github.com/abduelmorsi | abduelmorsi.com.tr

Control & Automation Engineering student at YTÜ with hands-on experience in robotics, AI systems, full-stack development, and cybersecurity. Built robust embedded and cloud-based solutions, developed original CTF challenges, and led multi-national communities.

EDUCATION

- **Yıldız Technical University (YTÜ)**   Istanbul, Türkiye
  B.Sc. in Control and Automation Engineering   *Oct 2023 – Present*

TECHNICAL SKILLS

Core Engineering: Control Systems, Inverse Kinematics, Embedded Systems, MATLAB, Simulink, Arduino
Software Development: Python, C++, JavaScript/TypeScript, Node.js, React, React Native, PostgreSQL, Django
Cloud & Systems: Cloudflare Workers, Serverless Architectures, KV Storage, WebSockets
Cybersecurity: Web Security, CTF Challenge Development, Network Analysis, Wireshark, Nmap, Metasploit
AI & Data: OpenCV, Random Forest, RAG Systems, LangChain, OpenAI API

PROJECTS

- **Robot Arm Ecosystem (Firmware & Mobile App)**
  - Secured funding via **YTÜ Yıldız Kaşifleri** to engineer a bio-signal controlled robotic platform.
  - Developed C++ firmware implementing Inverse Kinematics for precise 5-DOF motion control.
  - Trained a Random Forest classifier (94% accuracy) to decode EMG signals into servo commands.
  - Built a React Native app interfacing via Python/Serial bridge, reducing operation latency to under 100ms.

- **Barrier-Free Video Accessibility (TEKNOFEST Finalist)**
  - Architected a real-time system translating spoken content into 3D Sign Language animations for accessibility.
  - Implemented low-latency audio streaming using WebSockets and high-accuracy speech-to-text pipelines.
  - Developed a Chrome Extension to integrate accessibility features seamlessly across web platforms.

- **CTF Challenge Development & Platform Deployment**
  - Designed and implemented original cybersecurity challenges covering Web, OSINT, and Network attack vectors.
  - Deployed and managed challenges on CTFd for live workshops and competitive cybersecurity events.
  - Focused on realistic vulnerability chains, increasing participant engagement and learning outcomes.

EXPERIENCE

- **YTÜ International Students Club**   May 2024 – Jun 2025
  Secretary General & Web Lead   *Istanbul, Türkiye*
  - Led a 50+ volunteer, multi-national team and drove the club's digital transformation.
  - Built and deployed the official website uokytu.com.tr using Astro and Decap CMS, serving 450+ members.
  - Achieved 123k+ search impressions and 1.8k+ organic clicks in under six months through SEO optimization.

- **YTU Arab Students Union**   Aug 2025 – Present
  Community Lead   *Istanbul, Türkiye*
  - Designed and developed an AI-powered RAG chatbot to automate academic and administrative student inquiries.
  - Founded the Technical Office, responsible for digitalizing student services and developing internal tools and specialized websites.
  - Coordinated cross-functional teams spanning student affairs, media, cultural programming, and event operations.
  - Improved service accessibility and reduced operational overhead through centralized, technology-driven workflows.

CERTIFICATIONS & AWARDS

- **Cybersecurity Training Program – Core Istanbul**   2025
  - Advanced training in penetration testing, network security, and Linux system administration.

- **TEKNOFEST Achievement Certificate**   2025
  - Awarded for finalist project in AI-driven accessibility technologies.