



BARAN ÇELİK

Address: Antalya , Türkiye
Phone: [+905327350812](tel:+905327350812)
Email: celikbaran4865@gmail.com
Website: <https://barancelik.me>
Others: [Linkedin](#) / [Github](#)

SUMMARY

Computer Engineering graduate candidate with practical engineering experience spanning embedded IoT architectures, distributed telemetry pipelines, and scalable backend services. Proven track record in designing low-power, long-range mesh communication networks using ESP32 and LoRa (SX1278), alongside architecting multi-stage hardware systems—notably evolving the autonomous B&R Breeze platform from an ESP32-S3 and React Native micro-robot prototype with mechatronic automation (V1.0) to an enterprise-grade IoT facility management ecosystem (V2.0). Complemented by robust backend system engineering with Node.js, Express, C# (.NET), and relational databases. Experienced in Linux environments, VPS orchestration (Caddy/PM2), and API-driven systems. Recognized for technical leadership as a TEKNOFEST Team Captain and Student Club President, dedicated to engineering end-to-end connected device ecosystems and high-availability cloud infrastructure.

WORK EXPERIENCE

Backend Developer Intern, Morphosium Software

- **Full-Stack Development:** Designed and successfully deployed a full-stack, client-based administrative project using Node.js, Express.js, EJS, and MySQL/MariaDB.
- **Architecture & Data Management:** Organized project structure using the MVC (Model-View-Controller) pattern and established a robust data layer managed by Sequelize ORM.
- **Security Implementation:** Designed and implemented a comprehensive security system, including BCrypt password hashing and session-based authentication.
- **DevOps & Deployment:** Managed application deployment to VPS NetCup, utilizing PM2 for process management and Caddy for HTTPS installation, demonstrating server management skills.
- **Quality Assurance (QA):** Conducted extensive User Tests on live systems and validated API functionality using Postman, enhancing quality control processes.

Software Engineering Intern, Bimser Çözüm

- **Workflow & Process Management:** Designed, modeled, and deployed end-to-end enterprise process flows and approval mechanisms on the Bimser Synergy platform.
- **Backend & Service Integration:** Built custom backend services using ASP.NET (C#) and integrated external endpoints via REST APIs and Synergy ServiceAPI (GetProcessHistory).
- **Testing & API Validation:** Conducted runtime debugging, data validations, and lifecycle exception tracking across multi-stage workflows and RESTful endpoints.
- **Form & UI Architecture:** Created dynamic form interfaces and configured business rules linked directly to backend services to optimize operational efficiency.

EDUCATION

Alanya Alaaddin Keykubat University (ALKÜ)

- B.Sc. in Computer Engineering | 2022 – Present (Graduation Phase)
- **Focus Areas:** Focused study on Data Structures, Algorithms, and System Programming, with advanced independent project work in Backend Architecture (Node.js) and Data Science applications (Computer Vision).

SOME DEVELOPMENT PROJECTS

[click for more project](#)

1. B&R Breeze (V1.0 & V2.0) – Autonomous IoT & Commercial Facility Automation Ecosystem | Lead Systems Architect

- V1.0 (Autonomous Micro-Rental & Mechatronics):** Engineered an automated smart sunbed platform (Marti/scooter rental model); integrated an ESP32-S3 microcontroller over Wi-Fi/HTTPS with a React Native (Zustand) mobile app and Supabase (PostgreSQL, Edge Functions, RLS) backend. Built mechatronic actuation mechanisms including a servo lock, automated DC-motor sanitary sheet dispenser, and FSR weight sensors for real-time capacity violation detection.
- V2.0 (Enterprise Facility Operations & Closed-Loop Fleet Management):** Scaled the architecture into a centralized enterprise ecosystem; replaced app-only flows with desk-issued NFC wristbands and multi-tier dynamic pricing algorithms (hourly discounts, exemptions).
- Hardware-to-Cloud Integration:** Developed sub-second REST/HTTP polling and telemetry interfaces for remote unlocking, real-time device health reporting, and live occupancy mapping.
- Event-Driven Workforce Orchestration:** Architected automated field workflows triggering real-time mobile push notifications for staff cleaning tasks upon check-out, closed via authorized personnel NFC cards.
- Incident & Dispute Governance:** Designed structured refund and incident reporting layers requiring photographic proof and management approval gates, coupled with business analytics dashboards.

2. ESP32 & LoRa Based Wireless Mesh Communication Network (Hardware/IoT) | Lead Hardware & Firmware Developer

- Architected a low-power, long-range wireless sensor and telemetry communication network utilizing ESP32 and LoRa SX1278 transceiver modules.
- Integrated multiple hardware modules and sensors including an IMU (Inertial Measurement Unit), RFID reader, DFPlayer audio module, OLED display, PIR, LDR, passive buzzers, and LED buttons into an edge controller.
- Developed custom data-routing and edge-level hardware control algorithms to reliably process sensor data and maintain robust peer-to-peer transmission without cellular/Wi-Fi reliance.

3. Yunusemreyurdu – Facility Operations & Real-Time Alerting System | Full-Stack / Backend Developer

- Built a centralized operations management system with an Express.js backend and EJS, CSS3, JavaScript on the frontend, supported by relational database schemas across PostgreSQL and MySQL.
- Implemented secure user authentication/authorization workflows and an automated, event-driven notification subsystem powered by a custom Telegram Bot API integration.
- Managed production deployment on a Netcup VPS, configuring Caddy for automated SSL/TLS termination and PM2 for process monitoring and zero-downtime reloads.

4. LogicBox – Mobile Gaming & Covert Messaging Platform | Mobile & Systems Developer

- Engineered an interactive cross-platform mobile application housing classic games (Sudoku, Chess, Snake, Block Blast) with minimal client-side overhead.
- Designed and integrated a stealth data layer executing a custom, low-latency covert messaging protocol underneath the gaming interface for secure, undetected peer-to-peer communication.

TECHNICAL SKILLS & CERTIFICATES

[click for more details](#)

TECHNICAL SKILLS & EXPERTISE

- Embedded Systems & IoT: ESP32, ESP32-S3, LoRa (SX1278), Sensor Integration (FSR Weight Sensors, IMU, RFID/NFC, PIR, LDR), Actuators & Mechatronics (Servo & DC Motors), Embedded C/C++, Serial Protocols (UART, SPI, I2C), Telemetry Ingestion
- Backend & Systems: Node.js, Express.js, C# (ASP.NET Core), REST APIs, Supabase (Edge Functions, PostgreSQL, RLS), MVC, Reverse Proxy (Caddy SSL/TLS), Process Management (PM2), Linux (Ubuntu CLI), Bash Scripting
- Databases & State: PostgreSQL, MySQL, MariaDB, Sequelize ORM, State Management (Zustand)
- Frontend & Mobile: React Native (Bare CLI), React (Basics), EJS, HTML5, CSS3, JavaScript (ES6+)
- Systems, DevOps & Tools: Netcup VPS, Virtual Machines (VM), Git & GitHub, Postman, Telegram Bot API
- Enterprise Platforms: Bimser Synergy (Workflow Design, Form Architecture, Process Lifecycle Management), Synergy ServiceAPI
- AI & Computer Vision: Python (OpenCV, NumPy, Pandas), Fal.ai API, Lovable, AI-Assisted Rapid Prototyping
- Languages: Turkish (Native), English (Professional Working Proficiency - B2)

CERTIFICATIONS & TRAININGS

- Web Programming with Node.js: Comprehensive MVC architecture, Express.js, and Sequelize ORM implementation.
- Siber Vatan Cybersecurity Program (2024): Linux System Administration, Penetration Testing, and Network Security fundamentals.
- MEXT Lovable Hackathon (2026): 24-Hour Full-Stack AI Prototyping Certification.
- RaConf24 Cybersecurity Conference: Technical briefings and workshops on server security and offensive/defensive network defense.

ACTIVITIES & LEADERSHIP

- Product & Systems Architecture: Conceived and delivered end-to-end connected IoT solutions from physical mechatronic prototyping to cloud-connected telemetry systems (B&R Breeze V1.0/V2.0).
- Project Leadership: Team Captain in national engineering competitions (TEKNOFEST / TÜBİTAK), directing cross-functional milestones, embedded hardware integration, and technical reports.
- Hackathon Finalist: Designed and deployed an end-to-end generative AI prototype within 24 hours at the MEXT Lovable Hackathon.
- Community Leadership: Founding President of the ALKÜ Water Sports and Diving Club (Managed operations, regulatory compliance, and cross-team logistics).

REFERENCES

- Ahmet Sevban: Co-Founder @ NetPersonel & Morphosium | E-mail: ahmetsevban@morphosium.com
- Bayram Şahin: Software Support & DevOps & Consultancy Manager, Bimser Türkiye | E-mail: bsahin@bimser.com
- Buğra Küle: Consultancy Team Lead, Bimser Türkiye | E-mail: bkule@bimser.com
- Prof. Dr. Alper Kürşat Uysal: Computer Engineering Department President, ALKU | E-mail: alper.uysal@alanya.edu.tr
- Asst. Prof. Dr. Kübra Uyar Pınar: Computer Engineering Department, ALKU (Deep Learning, Computer Vision & AI) | E-mail: kubra.uyar@alanya.edu.tr