batuhan.baykalhhh@gmail.com
+90 537 840 45 46
https://www.linkedin.com/in/batuhan-baykal-b74263240/
https://github.com/b2atuhan

Ahmet Batuhan Baykal

Education	Sep. 2021 - Jan. 2026	**Sabancı University** · BSc- Computer Science & Engineering

Work Experience

Aug 2025 - Sep 2025

Eren Holding (Modern Karton)-Software Engineering Intern
- Developed an end-to-end customer service automation system to streamline internal workflows.
- Implemented machine learning models to auto-classify customer messages.
- Built a custom web interface for internal teams to manage requests.
- Integrated AI-powered auto-responses for frequently asked queries.
- Ensured seamless integration with existing relational databases.

Jul 2025 - Aug 2025

Tübitak Bilgem - Software Engineering Intern/ Frontend Tech Lead
- Led 9 frontend developers to deliver internal-use software.
- Selected the frontend tech stack for web and mobile platforms.
- Worked as part of the UI/UX team, collaborating to transform business requirements into detailed Figma designs.
- Conducted code reviews and ensured code quality across platforms.
- Tech Stack: React, Vite, Redux, TypeScript, Zustand, TailwindCSS, Flutter, Figma, Ant Design

July 2024 - Mar 2025

Rudiq – Software Engineer
- Created data scraping pipelines for business intelligence.
- Built full-stack services using Go, MongoDB, and Next.js.
- Refactored legacy systems, introducing QA and version control.
- Containerized and deployed systems using Docker and Kubernetes.

Jan. 2022 - June 2024

Sabancı University Collaboration Space - Assistant
- Conducted hands-on workshops on 3D printing and digital fabrication for hundreds of high school, undergraduate, master's, and PhD students.
- Developed strong public speaking and teaching skills through continuous interaction and mentoring.
- Delivered training sessions focused on additive manufacturing techniques, helping students bring their ideas to life using makerspace resources.

Projects

2025 Sep. - 2026 Jan

Smart Wheel Chair
- Built IoT-enabled smart wheelchair with smartphone/smartwatch integration for control and health tracking.
- Used ML to monitor user activity, give health recommendations, and detect anomalies.
- Integrated LiDAR for precise depth sensing, obstacle detection, and safe navigation.
- Produced all parts via 3D printing for cost efficiency and customization.
- **Tech Stack:** Raspberry Pi, Python, Machine Learning, LiDAR, 3D Printing, IoT

2025 June

Hotel Room Image Search System AI
- Built an AI-powered hotel room search tool using **GPT-4 Vision** for image-to-text conversion and **Sentence Transformers** for semantic search.
- Designed a hybrid ranking system with semantic and keyword filtering, plus **in-memory caching** for faster results.
- Supported multi-criteria search including room type, view, amenities, capacity, and furniture.
- **Tech Stack:** Python, GPT-4 Vision, Sentence Transformers, Semantic Search, Caching

2025 April

Rocket Match: Mobile Puzzle Game
- Built a mobile puzzle game with 10 levels, **match-3 mechanics**, rocket power-ups, and obstacle objectives.
- Implemented **grid-based gameplay**, dynamic cube matching, rocket combos, and **DOTween** animations optimized for mobile.
- Designed modular architecture with JSON-based level loading, **event-driven design**, and a save system using **Unity URP** for performance
- **Tech Stack:** Unity, C#, DOTween, JSON, URP

2025 June	**Web Horse Racing Game**
	• Developed a dynamic horse racing simulation game using **Vue3** with **TypeScript**, featuring animated race visualization and real-time position tracking.
	• Implemented a **multi-round race scheduling system** and responsive design for cross-device compatibility.
	• Managed state using **Pinia** and created UI components with **PrimeVue**, enriched with **CSS3 animations** for engaging visuals.
	• **Tech Stack:** Vue 3, TypeScript, Pinia, PrimeVue, CSS3 Animations
2025 Aug.	**N8N Automation Server**
	• Configured a self-hosted **n8n** automation server on **Raspberry Pi** to manage personal tasks, reminders, and production workflows.
	• Developed custom workflows using **Node.js**, **API integrations**, and **webhooks** for task automation, scheduling, and real-time notifications.
	• Utilized **Raspberry Pi OS** for lightweight, energy-efficient, and 24/7 operation.
	• **Tech Stack:** n8n, Raspberry Pi, API Integrations, Webhooks, Raspberry Pi OS

Other Projects

2025 May	**Raspberry Pi Scanner**
	• Standalone document scanner with ad-hoc networking, Python, OpenCV, OCR, Flask UI.
2024 Dec.	**Ios/Android Messaging Application**
	• Backend written in Java, implemented with Spring, Docker.
	• Frontend designed in React Native.
2024 Nov.	**Custom Compiler Design**
	• Custom compiler for a custom programing language
	• Developed using Flex and Bison
2024 Oct.	**Cryptographic Primitives for BlockChain**
	• Software for digital signature, transactions, and proof of work.
	• Used Eliptic Curve DSA and SHA3_256
2024 Jan.	**Image Recognition with Edge TPU**
	• Custom Footfall counter using object recognition and object tracking on Google Coral Dev Board
2023 Nov.	**Custom Large Language Model Adapter**
	• Creation of a custom dataset from open sources.
	• Trained Falcon 7B LLM.

Skills

Programing Languages:	Python, C++, Java, JavaScript, TypeScript, SQL, Go, C#, C, HTML, CSS, Prolog, Scheme, Bison, Flex
Frameworks	PostgreSQL, MySQL, MongoDB, Firebase, Node.js,FastAPI,Django,Spring Boot, React, React Native, NextJS,Vue,Vite, Selenium, BeautifulSoup, OpenCV, Flask Tensor Flow,Scikit-learn, Pandas, NumPy, Matplotlib,
Apps and Tools:	Docker, Kubernetes, Github, Jira, Miro, Unity, Figma, Canva, Blender, Photoshop, Microsoft Office Programs, Solidworks
Language:	Turkish (Native), English (Advanced), German (Beginner)

Activities

2021 Sep. - 2024 Jan.	Sabancı University Airsoft Club, Board Member / Co-President
2022 Dec. - 2023 June	International Relations, Diplomacy and Politics Club, President
2023 May - 2024 June	Sabancı University Debate Club, Board Member

Voluntary Work

Feb. – June 2022	**Sabancı University Civil Involvement Projects** – Voicing books for visually impaired children(Le Petit Prince)