

MEHMET SEMIH BABACAN

Istanbul, Turkey

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Software engineer with 3 years of experience and dual degrees in **Computer Science & Industrial Engineering**, building applications and scalable systems end to end. I ship full-stack products—from Python backends and agent workflows to Flutter apps and Next.js dashboards—with a focus on UX, performance, and delivery. As CEO of Solace Technology, I launched two AI-native products (smart home & B2B assistant), leading architecture, ML integration, and Go-To-Market. Previously contributed to MPC wallet and Central Bank's (CBDC) Digital Currency in TÜBİTAK, and real-time ML pipelines in R&D programs. Now seeking a high-impact software engineering role to build, ship, and scale.

EDUCATION & RESEARCH

B.Sc. Industrial Engineering, Yildiz Technical University — GPA: 3.32 2018–2024

B.Sc. Computer Science (Double Major), Yildiz Technical University — GPA: 3.05 2020–2024

Publication: [Beyond Synthetic Benchmarks: Assessing Recent LLMs for Code Generation](#)

WORK EXPERIENCE

CEO / Co-Founder Nov. 2023 – Aug. 2025
Solace Technology Incorporated *Istanbul, Turkey*

- Launched two AI products—**Ensi** (smart home) and **EMA** (B2B assistant)—leading full-stack development across mobile, web, and backend systems.
- Built Python/FastAPI backends with WebSockets to power agentic flows and LLM orchestration using LangChain, LangGraph, and RAG.
- Deployed CI/CD with GitHub Actions and Docker, and configured Nginx proxies and pipelines for automated, scalable releases.
- Delivered real-time pipelines for business logic, STT/TTS agents, and integrated GenAI APIs over WebSocket communication layers.
- Created internal tools and dashboards in Next.js; managed data infrastructure; Firebase, SQLite, PostgreSQL, and Supabase.
- Raised **\$250K**, secured TÜBİTAK 1507 grant, joined **Bilişim Vadisi**, and operated with a lean **\$200K** budget.
- Pivoted from hardware to SaaS through user discovery, prototyping, and feedback-driven iteration loops.
- **Scaled team from 4 to 8** by hiring across engineering and AI, and enforced execution with reviews.
- Drove GTM and brand strategy—including positioning, launch campaigns, demos—and handled operations, legal, and investor relations.

Part-Time Researcher Aug. 2023 – Dec. 2023
Scientific and Technological Research Council of Turkey (TÜBİTAK) *Kocaeli, Turkey*

- Built a secure cross-platform MPC Wallet in Flutter+Go to eliminate single-key custody risk.
- Contributed to a Go crypto library and simulated adversarial attacks to test protocol resilience.

STAR Presidential Research Intern Jan. 2022 – Jul. 2022
Scientific and Technological Research Council of Turkey (TÜBİTAK BILGEM) *Gebze, Turkey*

- Built CBDC smart contracts with Hyperledger Fabric, Solidity, and TypeScript for the Central Bank.
- Developed and deployed a regulated NFT prototype to test digital asset flows internally.

- **Torun Metal (ERP Intern)** — Supported **SAP MM/PP** rollout by gathering shop-floor data, generating live **KPI dashboards** (throughput, availability), and assisting inventory analysis using **SQL/Excel**.
- **Baykar Defense / Cezeri AI (Project Management Intern)** — Benchmarked **CI/CD** tools, built containerized pipelines, and proposed a **DevOps roadmap** including early-stage static analysis and deployment KPIs.
- **KGM Heavy Machinery (Production Intern)** — Conducted time studies, lean layout improvements, and **REBA/RULA ergonomic assessments**, delivering a factory report with **OEE** and resource planning insights.

UNIVERSITY CLUB & VOLUNTARY WORK

Deep Learning Engineer, Autonomous Systems Club

Nov. 2020 – Aug. 2021

Yildiz Technical University

Istanbul, Turkey

- Boosted detection pipeline throughput (YOLOv4 → TensorRT/TKDNN) from 36 to 140 FPS.
- Led dataset ops and launched Tableau reviews to ensure labeling and evaluation quality.

Rising Star Scholar, Turkish Technology Team Foundation

Feb. 2021 – Nov. 2022

Istanbul, Turkey

- Built a desktop evaluation system and visualized 600K+ records to aid the human resources operations.
- Mentored across AI, software, and entrepreneurship; supported TEKNOFEST operations.

TECHNICAL SKILLS & COMPETENCIES

GenAI / Agents	Cursor, Windsurf, LangChain, n8n, OpenAI, Claude
Backend	Python, FastAPI, Node.js, REST, Firebase, Supabase
DevOps & Infrastructure	Docker, GitHub Actions, CI/CD, GCP, Nginx
Frontend	React, Next.js, Flutter, Sanity CMS, HTML/CSS
Mobile / Desktop Apps	Flutter, React Native, PyQt, C++ Qt
Programming Languages	Python, TypeScript, JavaScript, Go, SQL, Bash, Dart, C/C++
Machine Learning	PyTorch, TensorFlow, Scikit-learn, XGBoost
Data & Visualization	Pandas, Polars, NumPy, Matplotlib, Tableau
Blockchain	Solidity, Circom, Remix IDE, Go
Dev Tools & Databases	Vim, VS Code, Copilot, PostgreSQL, MongoDB

Soft Skills & Competencies: Analysis, Agility, Problem Solving, Leadership, Systems Thinking, Tech Trends, Code Quality, UX Empathy, Drive, Optimization, Mentoring, Languages.

CERTIFICATES

Google	Project Management Specialization; Game & App Dev Academy (Entrepreneurship & Mobile Dev)
DeepLearning.AI	Deep Learning Specialization
Codecademy	R, Python, Data Visualization, Data Analysis
Mennan Şahin (TRT)	Diction & Effective Speaking in Turkish

LANGUAGES

English (Full Professional)	Turkish (Native)	Spanish (Intermediate)
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