

Onur Çağırıcı, PhD

Software Engineer

+420 704012017 | omur.cagirici@gmail.com | linkedin.com/in/cagirici

Summary

Full-stack Software Engineer with a PhD in Computer Science, twelve years in academic research and three years in professional industry engineering. Currently at Procore Technologies, delivering production-grade backend services and platform features in C#, ASP.NET Core, and TypeScript for a large-scale SaaS platform. Experienced in leading cross-functional teams, mentoring engineers, and driving technical direction. Active user of AI-assisted development tooling. Academic background covers algorithm design and computational geometry.

Skills

- **Core Languages:** C#, ASP.NET Core, TypeScript, Java, Python, C/C++, SQL
- **Frontend:** React, Next.js, state management, design systems, component libraries
- **Backend:** Node.js, REST APIs, GraphQL, .NET, ASP.NET Core, service architecture, data pipelines
- **Testing:** Playwright, Jest, CI/CD pipelines
- **Architecture:** System design, scalable services, technical documentation, code review
- **Tooling:** Git, Docker, cloud platforms, AI-assisted development (Cursor, Claude)
- **Leadership:** Agile Team Coach, cross-functional delivery, mentoring, sprint planning

Selected Projects

agent-eval-harness (TypeScript) | github.com/ocagirici/agent-eval-harness

- Evaluation suite for LLM agents with a 27-question set, 12 adversarial trap cases, and category-based scoring (`expected_exactly` / `expected_none`).
- Raised accuracy from 96.3% to 100% via a concise-response prompt constraint and reduced latency by 18% through prompt optimization; identified and documented a scorer false negative.

Vehicle Routing Optimization (Python, C++) | github.com/ocagirici/PVRP , [PVRPC](https://github.com/ocagirici/PVRPC)

- Solver for the Periodic Vehicle Routing Problem and related variants (VRP, MDVRP, SDVRP, and time-window extensions), with customer, depot, and vehicle models over a set of 42 benchmark instances.
- Prototyped the heuristics in Python, then reimplemented them in C++ for performance, using frequency-, demand-, and capacity-based ordering for day assignment and routing.

3D Sensor Localization (Python) | github.com/ocagirici/pythonCBL

- Localization for wireless sensor networks that recovers 3D node positions from known inter-node distances using trilateration and quadrilateration.
- Built custom vector and geometry primitives and 3D visualization of the recovered network with Matplotlib.

Reminder App (React Native, TypeScript) | github.com/ocagirici/reminder-app

- Cross-platform mobile reminder application built with Expo and React Navigation, with reminder state managed through the Context API and local device notifications via expo-notifications.
- Added date/time selection and English/Turkish localization (i18n-js with react-native-localize).

Education

PhD in Information Technologies, Masaryk University | Czech Republic | 2016 – 2021

MSc in Intelligent Engineering Systems, Izmir University of Economics | Turkey | 2012 – 2015

BSc in Software Engineering, Izmir University of Economics | Turkey | 2007 – 2011

Work Experience

Procore Technologies Czech Republic s.r.o. | Remote | Nov. 2024 – Jul. 2026

Full Stack Developer

- Extended estimating table attachment column from read-only to read/write, enabling end-to-end file upload workflows for estimators.
- Delivered Public v2 API enhancements for Esticom Proposals, extending backend service capabilities for external integrations.
- Shipped TypeScript estimating workflows that improved estimator efficiency by 25% and reduced requirement ambiguity, accelerating feature delivery.
- Replaced brittle Excel column mappings with dynamic references, reducing export failures by 60% and cutting maintenance time for recurring report generation.
- Implemented drawing-selection persistence in a high-traffic workflow, improving production reliability and reducing user friction.
- Leveraged AI-assisted tooling (Cursor) to accelerate delivery, closing 20+ tickets through AI-driven automation across estimating workflows.

Novanta Czech Republic s.r.o. | Brno, Czech Republic | May 2023 – Nov. 2024

Software Design Engineer

- Served as Agile Team Coach, leading cross-functional team cadence, sprint planning, and retrospectives.
- Delivered C# UI features for regulated medical pump devices within a cross-functional hardware/software team.
- Designed reusable UI component libraries, improving consistency and reducing duplicated implementation by 40%.
- Authored software operation manuals by mapping UI components, ensuring regulatory compliance and streamlining certification.
- Designed state machine diagrams to model device signal flows and UI interactions.
- Developed embedded C++ software to translate hardware signals into LED indicators, working with kernel-level components.

Ryerson University | Toronto, Canada | Oct. 2021 – May 2023

Postdoctoral Researcher

- Published two peer-reviewed research papers in computational geometry.
- Independently taught Algorithms (CPS616); organized CCCG 2022 (Canadian Conference on Computational Geometry).

Masaryk University | Brno, Czech Republic | Sep. 2016 – Oct. 2021

Doctoral Researcher

- Published six peer-reviewed papers in computational geometry and algorithm design.
- Built a polygon decomposition and smart bouncing algorithm for sensor-limited robots, validated against reflective and random strategies across 500 simulations.
- Produced formal complexity analysis and proofs for graph-theoretic algorithms in combinatorial optimization problems.

Izmir University of Economics | Izmir, Turkey | Nov. 2011 – Apr. 2016

Research Assistant

- Designed and implemented a multi-stage 3D localization algorithm for wireless sensor networks in Java, combining plane-level self-localization with inter-plane spatial alignment using linear algebra.

- Developed and benchmarked vehicle routing heuristics for a TÜBİTAK-funded logistics optimization project, comparing custom algorithms against optimal solutions and randomized baselines in Python.
- Assisted courses in Data Structures, Algorithms, Database Systems, and Discrete Mathematics over four years.