Tolga Kurt, Software Engineer

Senior Software Engineer with 15+ years of experience building high-performance, mission-critical software. My journey from developing structural analysis tools to co-founding a startup and eventually scaling high-impact Rust services at Meta has made me highly adaptable across diverse environments. Professional at work but an amateur at heart, I care deeply about my craft and take pride in the quality of my work.

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EXPERIENCE

Meta May 2022 — Dec 2025

Senior Systems Engineer

Became the domain expert and tech lead for Multisect, a critical service that identifies breaking changes through bisection at scale, supporting CI Effectiveness across Meta.

- Scaled the service from a state of barely-functioning with five instances under a load of a few hundred thousand bisections, into a rock-solid workhorse with a single instance (written in Rust) that doesn't break a sweat with several million bisections.
- Led major refactoring efforts to improve code quality, including the formation of a work scheduler and a complete rewrite of core executor components.
- Stepped into tech lead role, driving roadmap planning and onboarding multiple engineers both into the service and Rust language.

Booking.com Apr 2020 — May 2022

Full-Stack Developer

Developed customer-facing features across all product surfaces in Attractions, the experiences/activities vertical.

- Extracted product recommendation and review functions into standalone micro-services written in Java, suggesting more relevant products at scale for customers.
- Improved geo-awareness of our product suggestions, offering customers the most location-relevant products based on their travel destination.
- Migrated a significant portion of the monolithic backend/frontend complex into a micro-frontend architecture backed by a GraphQL powered orchestrator.

LARSA, Inc. Aug 2017 — Mar 2020

Senior Software Engineer

LARSA (http://larsa4d.com) is a New York based company that develops the premier simulation software for the design of billion-dollar bridges. I helped LARSA set up its Turkey development office, raising a productive team.

- Implemented the next generation of structural simulation tools using C++11/14 and C#.NET.
- Implemented report generation tools which validate the structural models using C#.NET and JavaScript.
- Migrated all manual test/build processes to cloud, effectively building a CI/CD pipeline using AppVeyor.

Middle East Technical University Dec 2014 — July 2017

Software Developer

Led a team of 3 software developers to automate administrative tasks of the Civil Eng. Dept.

- Led the implementation of a custom management system using AngularJS, Node.js, and MySQL.

Research Assistant

Researched how compute-heavy structural analysis can be partitioned and parallelized for the cloud.

- Created a web-based UI using AngularJS and three.js, and an analysis management tool using Node.js.

Playnex July 2013 — Nov 2014

Co-founder

Full-stack entrepreneur from ideation to the market and beyond: design, implementation, and management of Playnex mobile application which was installed on 200+ venues and reached 50k+ users in 6 months.

- Developed a hybrid mobile application for Android and iOS.
- Developed a node-webkit (now called NW.js) based music player for Windows and macOS.
- Implemented RESTful HTTP and socket servers using Node.js, Express, and MySQL.

Middle East Technical University Feb 2011 — June 2013

Software Developer

Migrated most of the administrative services of the Civil Eng. Dept. to a newly developed portal.

- Created a web-based administration portal using PHP and MySQL.

Research Assistant

Contributed to a research group working on parallelization of large-scale structural simulation.

- Implemented a graphical user interface using C++ and Qt for a full-featured FEA application.

EDUCATION

Master in Structural Engineering Feb 2011 — June 2014
CGPA: 3.57, Middle East Technical University

Bachelor in Civil Engineering Sept 2003 — Feb 2011
CGPA: 3.12, Middle East Technical University

SKILLS

The following skills have been developed through professional work and honed in production environments. Switching between domains over the years has given me a broader perspective on how systems are designed and how different tools serve different contexts.

Systems & Languages

Up to date: Rust, TypeScript/JavaScript. **A bit rusty:** Java, C++11/14, C#.NET, Node.js, PHP, Perl.

Backend & Architecture

Up to date: GraphQL, RESTful APIs, Micro-services. **A bit rusty:** Micro-frontends.

Frontend & Web:

Up to date: React. **A bit rusty:** AngularJS, three.js, Apache Cordova.

Databases

Up to date: MySQL, Hive. **A bit rusty:** MongoDB, Redis.

Cloud & DevOps

A bit rusty: Docker, Kubernetes, GitLab CI, AppVeyor.

IoT & Electronics

As a technical interest beyond the workspace: C, ESP/Arduino, KiCAD, EasyEDA.

ACHIEVEMENTS & AWARDS

Significantly Above Expectations - Meta 2025H1

Exceeded Expectations - Meta 2023

Exceeded Expectations - Booking.com 2020

MongoDB Certified Developer, Associate (C100DEV) - MongoDB Nov 2019

Best Assistant - Middle East Technical University, Civil Eng. Dept. Nov 2015
Awarded for impactful work in IT services.

Entrepreneurial Seed Funding - TÜBİTAK Feb 2013
Awarded funding for the project "Development of an Isogeometric Analysis Software".

Honor Student - Middle East Technical University Jan 2011
Graduated as an Honor Student. Also listed twice on the High Honor Roll.

PUBLICATIONS

Application of Artificial Neural Networks on Building Energy Estimation - ICENTE'17 Dec 2017
In this study, an Artificial Neural Network, capable of forming different network topologies and using several activation functions, is developed to estimate the energy performance of the buildings efficiently.

A Cloud Based Workflow for a Finite Element Analysis Preprocessor - CCP: 107 Mar 2015
This paper presents a cloud based workflow for the creation and analysis of FEA models with a web-based GUI and a modular backend which consists of many workers that are distributed over a network of virtual machines.