

Seyedmasoud Asadzadeh

Programmer

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WORK EXPERIENCE

Formal verification and security lab, USI (2021 – present)

Programmer

Projects: [SMT-solver](#), [Model Checker](#), [web site](#)

- Designed and developed a parallel SMT solver: The distributed client-server version of OpenSMT on TCP/IP, called SMTs, was designed and developed to run in AWS parallelization infrastructure. [GitHub](#)
- Developing and building infrastructure necessary to interface with AWS resources and running our parallel solver. [GitHub](#)
- Designed and developed a partition tree protocol as a way of organizing the solving of monotonic logics by combining divide-and-conquer parallelism, algorithm portfolio, and lemma sharing. [GitHub](#)
- Contributed to the development of parallel library on OpenSMT2 solver as a clean API layer. [GitHub](#)
- Contributed to the development of miscellaneous shared tools for debugging, data visualization, and profiling sequential and parallel solver. [GitHub](#)
- Established an open-source web content management system, Drupal, as our Formal verification and security lab's web site: [verify.inf.usi.ch](#).

Hamfekran Information Technology Group, (2013 – 2019)

Backend Developer (Remote)

Project: [Online Services \(license, tax and toll\)](#), [Ticketing](#)

- Contributed to the development of REST APIs on Service Oriented architecture with the focus on connecting the internal system to online interfaces.
- Created backend for single page event log analyzer & ticketing application.
- Unified the process of document generation and transmission engine by building a set of libraries and interfaces (E-Letters).

Backend Developer

Project: [AutoTaxi \(ETAXI\)](#)

- Designed and developed workflows and processes for taxi-business to serve taxi companies' needs of metropolitan cities such as buying/selling taxis, issuing driving certificates, school services.
- Participated in the design and development of service oriented architecture to meet the process-oriented business needs.
- Achieved improvement in the system's speed by 50% and enhanced scalability and maintainability.

Backend Developer

Project: [Automation of Vehicle Technical Inspection \(VTI\)](#)

- Automated the recognition and image processing of vehicles' number plates.
- Assisted to record inspection hardware outputs & to issue the certification.

FullStack Developer

Project: [Funeral Service Management](#)

- When I was hired, the FSM Application was scattered into decentralized apps which had massive cost on support, development, and maintenance.
- Achieved, roughly, a 200% improvement in performance by developing a centralized webApp Automating Burial and Funeral Procedure, supporting selling gravesites, custom reports as well as integrating with BI programs.

ABOUT

A software developer with a demonstrated history who worked on research-based, commercial and corporate softwares, developing and maintaining newly developed and legacy progressive apps utilizing object oriented design in a scrum team. Willing to learn who can play a reliable and loyal role in a team.

TECHNICAL SKILLS

Languages

	Years
C#	● ● ● ● ●
C++	● ● ● ● ●
Python	● ● ● ● ●
Bash	● ● ● ● ●
TSQL	● ● ● ● ●
HTML, JavaScript, CSS	● ● ● ● ●

Automation Continuous Integration

CircleCI	● ● ● ● ●
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Web Frameworks

ASP.NET Web Forms	● ● ● ● ●
ASP.NET MVC	● ● ● ● ●
.NET Core	● ● ● ● ●

Desktop Frameworks

Windows Forms	● ● ● ● ●
WPF	● ● ● ● ●

Communication Frameworks

ASP.NET WebAPI/RESTful	● ● ● ● ●
WCF/SOAP	● ● ● ● ●

ORM

Entity Framework, LINQ	● ● ● ● ●
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DataBases

MS SQL Server	● ● ● ● ●
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Reporting

MS SQL Reporting Service	● ● ● ● ●
Crystal Reports	● ● ● ● ●

Versioning and Build Tools

Git, TFS	● ● ● ● ●
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3rd Party .NET

DNN (CMS)	● ● ● ● ●
NopCommerce (E-commerce)	● ● ● ● ●

Server Technologies

Windows Server, IIS	● ● ● ● ●
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SDLC

Agile development/Scrum	● ● ● ● ●
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FREELANCING PROJECTS

Legacy Migration on Real Estate Portfolio Management

Contributed to the migration of MS Access database to SQL Server and Web Form app into MVC.

Automation System of Transportation

Developed a distributed desktop solution that offers transportation services throughout the country. All orders are logged from the registration time to delivery time using RFID tech.

Flight Information Display App

Created an application to display real-time flight information for passengers can be used in airports and hotels. It can be connected to on-line flight information data source and customizable to show Ads.

WCF Service front-ended by USSD

Developed a service to issue up to 15-thousands real-time permits a day to control the entrance of vehicles into traffic zones.

Payment Provider

Worked with POS terminals SDK for developing payment providers.

Facial Navigator

Implemented a voice-face recognition prototype for navigation purpose using EmguCV (.NET wrapper for C++ OpenCV computer vision library). Composed of six components: Face Detector, face database, Training Set Manager, Face Recognizer, speaker, Speech Recognizer.

EDUCATION

B.Sc in Software Engineering
University of Science and Culture
(2005–2010) 📍 Tehran, Iran

Diploma in Mathematics
School of Exceptional Talents (NODET)
(2002–2005) 📍 Bojnord, Iran

TEACHING ASSISTANT

Advanced Object-Oriented Programming,
Data structures, Operation Systems

PUBLICATION AND AWARD

- Parallel and sequential OpenSMT Solver in SMT-COMP 2022 [Link](#)
- Parallel and sequential OpenSMT Solver in SMT-COMP 2021 [Link](#)
- Forecasting rail transport petroleum consumption using an integrated model of autocorrelation functions-artificial neural network. Journal of Acta Polytechnica Hungarica, 11(2), 203-214. [Link](#)

SOFT SKILLS

Cooperative, adaptable and enthusiastic about learning.

HOBBIES

📺 Watching Documentaries

📖 Reading 🌲 Hiking