

# Elahe Paikari

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Los Angeles, California, USA

## Tech Stacks

- Languages: Python, C/C++, R, JavaScript, HTML/CSS, SQL
- Technologies: Vue.js, Node.js, React.js, Angular.js, Bootstrap, Angular.js
- Other: API design, relational databases, Git, Agile.

## Education

**Ph.D. in Software Engineering** September 2017 – May 2023  
University of California, Irvine, USA – Dept. of Informatics

**M.S. in Software Engineering** August 2012 - August 2014  
University of Calgary, AB, Canada – Dept. of Electrical and Computer Engineering

**B.S. in Software Engineering** August 2008 - July 2012  
Azad University, Tehran, Iran – Dept. of Computer Engineering

## Software Development and Research Experience

**Software Developer and Researcher – University of California, Irvine** September 2017 – May 2023

- Designed and developed a video annotation tool to add drawing and text to the timeline of video.
- Designed and implemented custom web scraping tools to automatically download metadata from Google Issue Tracker, YouTrack, and Bugzilla.
- Performed a range of statistical analyses and regression models on more than two million data from Minecraft, Android, Mozilla, IntelliJ, and LibreOffice, published in a major software engineering conference.
- Developed several machine learning classifiers to classify bug reports as actionable or non-actionable, achieved the highest performance results to date, and published in a major software engineering conference.
- Designed and developed a voice-based interface to an electronic whiteboard sketching tool.
- Designed and developed an slack chatbot for early detection of potential development conflicts arising from concurrent code changes, published in a major software engineering conference.

Submitted a Journal in a major software engineering conference about the current state of software chatbots. Technologies and software tools: Python, R, RStudio, VSCode, Git, Github, Statistical Analysis, Linear/Logistic Regression, Web Scraping, Scikit-Learn, NumPy, Panda, NLTK, Matplotlib, SciPy, OpenCV, Jupyter Notebook.

**AI Software Engineer – MIT-IBM Watson AI Lab** May 2022 – August 2022

- Designed, developed, and unit tested a code debugger API in a multi-agent system to enable debugging of agents' source code at runtime, currently being used by Advanced Prototyping Team at Watson AI Lab.
- Designed, embedded, and unit tested a code editor for manipulating source code at runtime in a distributed agent system, currently being used by Advanced Prototyping Team at Watson AI Lab, published in a major software engineering conference.

Technologies and software tools: Python, Vue.js, VSCode, pycharm, Git.

**Software Developer – Intelliview Technologies Inc.** February 2015 – September 2017

- Designed, developed, and unit tested core Intelliview software components and features (video analytics solutions for industrial surveillance applications) as a service.
- Designed, implemented, and tested web application/UI.

- Worked with QA staff and other stakeholders to resolve bugs and implement feature requests.
- Participated in and led code reviews, development processes and standards.
- Conducted research on emerging technologies and implemented prototypes and proof of concepts.

Technologies and software tools: Python, C/C++, MFC, Boost, QT, HTML, CSS, JavaScript, Node.js, React, Angular.js, Bootstrap, Web Sockets, RESTful API, PostgreSQL, Linux, Microsoft Visual Studio, Weka, VMWare, Subversion, Scrum.

**Software Developer – University of Calgary, Shell, and City of Calgary** September 2014 – February 2015

- Analyzed Calgary Road info databases in Microsoft SQL Server and developed ETL processes, to form a data mart.
- Analyzed and designed data models via statistical and mining methods.
- Designed an online/offline safety feedback system, applying multi-agent methods and UML.
- Developed a video driven traffic system, applying image-processing techniques.

Technologies and software tools: C/C++, Pentaho, Microsoft Visual Studio, Weka, Aimsun simulator.

**Software Research – University of Calgary** February 2013 – August 2014

- Integrated PARAMICS traffic simulator with OPNET wireless network simulator using open-source applications to evaluate Connected Vehicle (CV) communication ranges in Wi-Fi and WLAN protocols.
- Developed ETL processes to extract output CSV files from PARAMICS, transformed the data into the XML format, for the use of OPNET.

Technologies and software tools: C/C++, Microsoft Visual Studio, Weka, PARAMICS simulator, OPNET simulator.

**Software Developer – University of Calgary and Encom Wireless Data Solutions Inc.** August 2012 – February 2013

- Designed and analyzed a Connected Vehicle (CV) system as a multi agent system.
- Implemented APIs to develop a system model to support simulation of CV systems, leading to the simulator being able to compete with commercial simulators.
- Addressed client's requests and provided optimum outputs, resulted in willingness of the University to invest in similar projects.
- Validated the developed CV system by reducing accidents and travel time index in Deerfoot trail, Calgary, Alberta; recommendations and assessment results are currently being used by the client to implement CV systems in Calgary and having the potential to be applied in other cities of Canada.

Technologies and software tools: C/C++, Microsoft Visual Studio, Weka.

**Grant** May 2016 – April 2018

Alberta Innovates (AITF) – Industry Research and Development Associate program for amount of 110k.

**Volunteer**

**Mentor – University of California, Irvine** June 2019 - December 2020

- Led a team of 5 and a team of 7 software engineering undergrad students in designing and implementing software chatbots.

**Judge – University of California, Irvine** May 2021 - May 2021

- Determined winners of the VenusHacks hackathon (UC Irvine's first women-centric hackathon) by reviewing projects ranging from web development to machine learning.

**University of Calgary – Calgary, Canada** January 2013 - December 2013

- Diversity counselor – Center of International Students and Study Abroad