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# ADRIANA SEJFIA

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## RESEARCH INTERESTS

Vulnerabilities  
Software Architecture  
Software Engineering  
Recommender Systems

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## LANGUAGES AND TECHNOLOGIES

Java  
Python  
PHP  
R  
C  
MATLAB



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## EDUCATION

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### PHD IN COMPUTER SCIENCE • MAY 2023 • USC

Adviser: Nenad Medvidovic

Research Focus: vulnerabilities, software architecture and recommender systems

### MSC IN SOFTWARE ENGINEERING • MAY 2018 • RIT

College Delegate of Class of 2018

Courses taken: Knowledge Processing Technologies, Process Engineering, Software Evolution and Re-engineering, Web Technologies, Foundations of Software Engineering, Software Modeling

GPA: 4.0

### BS IN INFORMATION TECHNOLOGY • MAY 2015 • RIT IN KOSOVO

Valedictorian of Class of 2015

Courses taken: Client-side programming; Server-side programming; Databases and Data Modeling; Discrete Mathematics; UX Design; Design of Health Information System in Kosovo (Thesis); Introduction to Multimedia.

GPA: 4.0

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## EXPERIENCE

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### RESEARCH ASSISTANT • USC • AUGUST 2018 – AUGUST 2019; JANUARY 2020 -

Work with different projects focusing in software architecture and vulnerability detection, using architecture recovery techniques, program analysis and machine learning.

### TEACHING ASSISTANT • USC • AUGUST 2019 – JANUARY 2020

Help in devising homework assignments and group project, grade and manage the graders for the CSCI-578 Software Architectures class

### RESEARCH ASSISTANT • RIT • JANUARY 2017 – MAY 2018

Assist Professor Mehdi Mirakhorli at RIT as a part-time employee in his research, mostly dealing with architectural issues, including vulnerability prediction and traceability in the source code.

### FOUNDER/MEMBER • GIRLS CODING KOSOVA • FEBRUARY 2014 – JUNE 2016

Girls Coding Kosova is a local NGO in Kosovo which I helped found and grow. The NGO's main goal is to help girls improve their programming skills while delivering practical apps that solve everyday problems.

### RESEARCH ASSISTANT • RIT KOSOVO • JANUARY 2012 – MAY 2013

Assist Professor Arni Arnthorsson in his research activities

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## PUBLICATIONS

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### **ESEC/FSE • 2020**

FrUITeR – A Framework for Evaluating UI Test Reuse

### **ICSA • 2020**

Strategies for Pattern-based Detection of Architecturally-relevant Software Vulnerabilities

### **ESEC/FSE • 2019**

Achilles' Heel of Plug-and-Play Software Architectures: A Grounded Theory Based Approach

### **ECASE WORKSHOP • 2019**

A Pilot Study on Architecture and Vulnerabilities: Lessons Learned

### **JOURNAL OF SYSTEMS AND SOFTWARE • 2018**

An Empirical Study of Tactical Vulnerabilities

### **ICSA • 2017 (BEST PAPER AWARD)**

Understanding Software Vulnerabilities Related to Architectural Security Tactics: An Empirical Investigation of Chromium, PHP and Thunderbird

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## PROJECTS

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### **VULNERABILITY PATTERN DETECTION • 2019**

This project aims to automatically detect pattern for vulnerability types in the source code. Technologies used: Java, Git.

### **TWEET SENTIMENT ANALYSIS • 2018-2019**

This project aims to perform real-time sentiment analysis on tweets coming out of Kosovo, as part of a volunteer experience for TLP scholars.

### **PATCHILYZER TOOL • 2018**

Patchilyzer is a tool that traces known vulnerabilities across releases of a software product, by building ASTs of the versions involved in the vulnerability and using an algorithm to trace similarities between that and a subject version. This tool was built as part of my master thesis. Technologies used: Java, Git

### **TOOLSHARE WEB-APP • 2016**

Toolshare is a web application that supports sharing tools with members of the same community, defined based on zipcode. Technologies used: Python, Django, Bootstrap, SVN

### **SAM2017 WEB-APP • 2016**

SAM2017 is a web application built to enable participant in a conference to submit papers and enables the organizers to assign reviewers and have the papers reviewed. Technologies used: Python, Django, Bootstrap, Git

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## VOLUNTEER EXPERIENCE OR LEADERSHIP

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### **OPEN DATA ACTIVIST IN KOSOVO**

Open Data Kosovo is an NGO based in Kosovo that aims to open up and make data about Kosovo, in particular the government, more presentable and easily accessed by the people of Kosovo. Together with ODK, we visualized procurement data from different municipalities in Kosovo.

### **DIGITAL KOSOVO AMBASSADOR**

The platform created under Digital Kosovo served as a 'mailman' for people from Kosovo to send their requests to add Kosovo in websites in the list of countries to different organizations and companies across the world.

### **KARL POPPER DEBATE COACH**

Debate coach for my hometown's debate clubs comprising 8-10 debate teams.

### **KARL POPPER DEBATE/BRITISH PARLIAMENTARY DEBATE JUDGE**

Judge in national and international debate tournaments in Karl Popper and British Parliamentary debate formats

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## AWARDS AND SCHOLARSHIPS

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### **GOOGLE PHD FELLOWSHIP RECIPIENT • 2020**

Recipient of the 2020 Google PhD Fellowship in the category of Programming Technologies and Software Engineering

### **TRAVEL AWARD • 2020 • USC GRADUATE SCHOOL**

Travel award to attend the ICSA conference

### **CRA-WP GRAD COHORT FOR WOMEN • 2020**

Selected for fully funded participation

### **GRACE HOPPER ATTENDANCE SCHOLARSHIP • 2019 • CS DEPT AT USC**

Selected by Computer Science Department at USC to participate in Grace Hopper Celebration

### **ANNENBERG FELLOWSHIP • 2018 • USC**

A fellowship funding my PhD studies at USC

### **TLP SCHOLARSHIP WINNER • 2016 • USAID**

A competitive scholarship funded jointly by the governments of Kosovo and US to fully cover tuition and living expenses for graduate studies in the US

### **NEXT GENERATION SCHOLARSHIP WINNER • 2014 • IPKO FOUNDATION**

A competitive scholarship funded by the Kosovar IPKO foundation granted to students who can demonstrate creativity, drive and ground-breaking ideas

### **OUTSTANDING SCHOLAR • 2014 • RIT KOSOVO**

A competitive scholarship granted annually by RIT-Kosovo based on academic excellence to one student in the student body, covering 100% of the tuition

### **BEST IN GENERATION SCHOLAR • 2013 • RIT KOSOVO**

A competitive scholarship granted annually by RIT-Kosovo based on academic excellence to one student per generation, covering 60% of the tuition

### **EXCELLENCE SCHOLARSHIP • 2012 • RIT KOSOVO**

A scholarship granted to RIT-Kosovo students based on GPA

### **MERIT BASED SCHOLARSHIP • 2012 • RIT KOSOVO**

A scholarship granted to RIT-Kosovo students based on GPA

### **QUARTER-FINALIST • 2011 • IDAS TOURNAMENT LJUBLJANA, SLOVENIA**

Quarter-finalist in the international British Parliamentary debate

### **HOMETOWN SCHOLARSHIP • 2011 • RIT KOSOVO**

A scholarship granted to RIT-Kosovo students based on GPA

### **FULL SCHOLARSHIP PARTICIPANT WOMEN2WOMEN • 2011 • US EMBASSY IN KOSOVO**

Selected to participate in the W2W conference in Boston, MA.

### **1<sup>ST</sup> PLACE WINNER • 2011 • KOSOVA OPEN KARL POPPER DEBATE**

Winner of the Karl Popper Debate Tournament in Peje, Kosovo

### **SEMIFINALIST • 2011 • KOSOVA OPEN KARL POPPER DEBATE**

Winner of the Karl Popper Debate Tournament in Ferizaj, Kosovo