AMIR ELMISHALI

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EDUCATION

Ph.D., Ben-Gurion University of the Negev, Israel *2016 - 2021*
Department of Software and Information Systems Engineering
Dissertation topic: Artificial Intelligence Techniques for Automated Bug Prediction and Detection.
Supervised by Professor Meir Kalech and Professor Roni Stern.

M.Sc, Ben-Gurion University of the Negev, Israel *2014 - 2016*
Department of Software and Information Systems Engineering GPA: 93.06/100
Supervised by Professor Meir Kalech and Professor Roni Stern.
Member of "Meitar" Excellence Program, started M.Sc during B.Sc.

B.Sc, Ben-Gurion University of the Negev, Israel *2011 - 2015*
Department of Software Engineering. Outstanding Performance Award. GPA: 89.05/100

EMPLOYMENT

Postdoctoral Researcher 2021
Anomaly Detection and Diagnosis lab, Ben-Gurion University of the Negev
Researched and advised students in the field of artificial intelligence and software engineering.

Ph.D Summer Internship 2020
Facebook
Research, design and implementation of a feature recommendation system for data scientists at Facebook.

R&D Software Engineer 2015 - 2019
8200 Intelligence Unit, IDF
Development of C++ and Python platform for cyber-security applications for Windows.

Research Assistance 2013 - 2014
Anomaly Detection and Diagnosis lab, Ben-Gurion University of the Negev
I researched and implemented software defect classification based on code analysis and repository mining.

ACADEMIC ACTIVITIES

Teaching Assistant Ben-Gurion University
- "Introduction to Software Engineering" - 2020
- "Workshop on Software Engineering Project" - 2021
- "Fault Diagnosis in Artificial Intelligence" - 2017 - 2021

Research Assistance in Advising M.Sc Students

1. Ori Bar-Ilan, topic: Learning Software Anomalous Behavior for Automated Diagnosis 2017-2019

2. Eran Hershkovich, topic: Prioritized Test Generation Guided by Software Fault Prediction 2017-2019

3. Eyal Hadad, topic: Trace Prediction for Software Diagnosis 2018-2020

4. Inbal Roshanski, topic: Cross Project Bug Prediction 2018-2020

5. Shir Cohen, topic: Generative Adversarial Network for Just-in-Time Defect Prediction with Semantic Changes Sensitivity 2020-2022

6. Matan Hazan, topic: History based Software Diagnosis 2020-2022

Program Committee Member

1. National Conference of the American Association for Artificial Intelligence (AAAI). 2020-2022

2. International Joint Conference on Artificial Intelligence (IJCAI). 2020-2022

3. European Conference on Artificial Intelligence (ECAI). 2020-2022

PUBLICATIONS

Journals

1. **Elmishali, Amir**, Stern Roni, and Kalech Meir. "Diagnosing Software System Exploits." IEEE Intelligent Systems (2020).
   Impact factor of IEEE Intelligent Systems 2020 is: 3.405, 53/140, Q2

2. **Elmishali, Amir**, Stern Roni, and Kalech Meir. "An Artificial Intelligence paradigm for troubleshooting software bugs." Engineering Applications of Artificial Intelligence 69 (2018).
   Impact factor of Engineering Applications of Artificial Intelligence-18 is: 3.526, 15/88, Q1

Conferences

1. **Elmishali, Amir**, Sotto-Mayor Bruno, Roshanski Inbal, Sultan Amit and Kalech Meir. "BEIRUT: Repository Mining for Defect Prediction." IEEE 32st International Symposium on Software Reliability Engineering (ISSRE) 2021.
   Rank: A

2. Hershkovich Eran, Abreu Rui, Stern Roni and **Elmishali, Amir**. "Prioritized Test Generation Guided by Software Fault Prediction". IEEE International Conference on Software Testing, Verification and Validation (ICST) 2021.
   Rank: A

3. **Elmishali, Amir**, Stern Roni, and Kalech Meir. "DeBGUer: A Tool for Bug Prediction and Diagnosis." Proceedings of the AAAI Conference on Artificial Intelligence. Vol. 33. 2019.
   Rank: A*

4. **Elmishali, Amir**, Stern Roni, and Kalech Meir. "Data-augmented Software Diagnosis." Twenty-Eighth IAAI Conference. 2016.
   Rank: A*

Under Review

1. **Elmishali, Amir** and Kalech Meir. "Issue-Driven Features for Software Fault Prediction" . Information and Software Technology 2022
   Impact factor of Information and Software Technology-20 is: 2.730, 31/108, Q2

2. Sotto-Mayor Bruno, **Elmishali, Amir**, Kalech Meir and Abreu Rui. "Exploring Designite for Smell-Based Defect Prediction". International Conference on Software Engineering (ICSE). 2022
   Rank: A*

3. Roshanski Inbal, **Elmishali, Amir**, and Kalech Meir. "OSCAR : Component-Sensitive Cross-Project Software Fault Prediction". IEEE Transactions on Reliability 2022
   Impact factor of IEEE Transactions on Reliability-20 is: 4.424, 13/108, Q1

4. Mordoch Argaman, Natan Avraham **Elmishali, Amir**, and Kalech Meir. "Bugs Assignment for Workload Distribution". Soft Computing 2022
   Impact factor of Soft Computing-20 is: 3.643, 49/139, Q2

5. Cohen Shir, **Elmishali, Amir**, and Kalech Meir. "SeC-GAN: Generative Adversarial Network for Just-in-Time Defect Prediction with Semantic Changes Sensitivity". International Conference on Mining Software Repositories (MSR). IEEE, 2022
   Rank: A

AWARDS AND HONORS

IDF's outstanding scientist	2018
Recommended by commander of the Israeli intelligence corps, IDF	
B.Sc outstanding performance award	2015