Yasin Findik

Cambridge, MA
yasinfindikk@gmail.com
linkedin.com/in/yasinfindik

Education

2021 – Present **Ph.D. in Computer Science and Engineering**, *University of Massachusetts Lowell*, Massachusetts, USA.
CGPA: 4.00 out of 4.00
Advisor: Asst. Prof. Reza Ahmadzadeh

2016 – 2018 **M.Sc. in Computer Science and Engineering**, *Sabanci University*, Istanbul, Turkey.
CGPA: 3.58 out of 4.00
Thesis: Assisting Decision Making in Exploratory and Collaborative Visual Analytics Sessions with an Analytical Agent
Advisor: Assoc. Prof. Selim Balcisoy

2011 – 2016 **B.Sc. in Computer Engineering**, *Izmir Institute of Technology*, Izmir, Turkey.
CGPA: 3.65 out of 4.00
Ranked 2nd out of 72 in the Computer Engineering Department
Ranked 4th out of 586 in the Institute
Thesis: Excluding Impediments from Images with Motion Decomposition
Advisor: Asst. Prof. Mustafa Ozuysal

Research Experience

August 2021 – Present **Research Assistant**, PERSISTENT AUTONOMY AND ROBOT LEARNING (PEARL) LAB *University of Massachusetts Lowell*.
• Currently exploring how Large Language Models (LLMs) can be used within Multi-Agent Reinforcement Learning (MARL) frameworks to improve agents' performance and encourage the emergence of novel behaviors.
• Conducted research on MARL and emergent behaviors in collaborative environments. Designed and implemented a graph-based approach to guide and influence the agents' behavior in multi-agent settings.
• Implemented existing single-agent deep reinforcement learning architectures (DQN, A2C, DDPG, PPO). Implemented and extended existing multi-agent deep reinforcement learning architectures, both value-based (VDN, QMix) and policy-based (MADDPG, MAPPO).
• Designed and implemented a novel algorithm, D-CBRS, to address intra-class diversity in continuous learning.

September 2016 – July 2021 **Research Assistant**, BEHAVIORAL ANALYTICS AND VISUALIZATION LAB (BAVLAB) *Sabanci University*, BAVLAB is cofounded by Sabanci University and MIT Media Lab Human Dynamics Group.
• Conducted research on human-agent interaction, combining approaches ranging from visualization and computer vision to natural language processing.
• Implemented an analytic agent capable of processing the environment and providing ideas for data interpretation based on the presented data and cues from human subjects.
• Performed research on collaborative computer-aided designs using a tabletop setup.
• Conducted studies on Twitter data and analyzed patterns using data mining methods.

September 2015 – May 2016 **Research Student**, VISUAL INTELLIGENCE RESEARCH GROUP *Izmir Institute of Technology*.
• Worked on obstruction removal from images. Implemented a computational approach to remove impediments such as fences, windows and reflections from images.

Work Experience

June 2022 – August 2022 **Data Science Intern**, NOVARTIS *New Jersey, United States.*
Novartis operates in the pharmaceutical and healthcare sector, focusing on the research, development, and commercialization of innovative medicines and healthcare solutions.

- Developed Mixed Marketing Model(s) using Turkey sales data for Jakavi and Kisqali.
- Preprocessed and mined data for the Belgium Sentiment Analysis Project.
- Reviewed literature and designed experiments for the Genomics Project on breast cancer.

March 2020 – July 2021 **Machine Learning Engineer**, CICEK SEPETI *Istanbul, Turkey.*
Ciceksepeti.com is an online floral and gourmet foods, gift retailer operating in Turkey with subsidiaries (lolaflora.com) in other countries.

Led a team of three junior engineers in designing and building an efficient framework to find the optimal price of products. The framework combined modern machine learning approaches with structural models to maximize company profit. The underlying model was trained on prior market data to predict optimal prices by learning market dynamics. The framework also allows employees to inspect the price differences of the company's products among e-commerce websites.

November 2018 – June 2019 **Machine Learning Engineer**, SOFTTECH *Istanbul, Turkey.*
SoftTech is the tech company behind IsBank, Turkey's largest bank.

Implemented a platform for chatbot model training and management. Based on the quantity of data, the platform either utilizes deep learning (LSTM/GRU architectures) or similarity algorithms (e.g., n-grams, word mover's distance) to build the chatbot. The platform is currently used by IsBank, where millions of users interact with the company's chatbot daily.

August 2015 – June 2016 **Software Engineer**, SECUBE-IZMIR TECHNOLOGY DEVELOPMENT ZONE *Izmir, Turkey.*
During my senior year of college, I worked as a full-time software engineer. I developed CubeBox, an application similar to Google Drive, which allows users to store their files, access them remotely, and share them with others. However, unlike the already available apps, CubeBox encrypts the files before storing them.
(Link to app: `https://www.secube.com.tr/en/cubebox-document-management-system`)

June 2015 – August 2015 **Software Engineering Intern**, SECUBE-IZMIR TECHNOLOGY DEVELOPMENT ZONE *Izmir, Turkey.*
Developed a mobile application for the members of the Turkish Parliament to securely sign and share documents.

Technical skills

Languages Python, C, Matlab, R, Object-Oriented (Java/C++/C#), Web Development (HTML/CSS/Javascript/PHP)

Frameworks Pytorch, Tensorflow, Keras, Flask, OpenCV, OpenGL, D3, Android

Others AWS, Docker, Kafka, Solr, MongoDB, Git

Publications

2024 ***Y. Findik***, *R. Azadeh*; Mixed Q-Functionals: Advancing Value-Based Methods in Cooperative MARL with Continuous Action Domains. *International Conference on Neural Information Processing Systems (NeurIPS)* ***[Under Review]***.

2024 ***Y. Findik***, *H. Hasenfus, R. Azadeh*; Collaborative Adaptation for Recovery from Unforeseen Malfunctions in Discrete and Continuous MARL Domains. *In proceeding 63rd IEEE Conference on Decision and Control (CDC), Milan, Italy, pp. xx-xx, Dec. 16-19, 2024* ***[Under Review]***.

2024 ***Y. Findik***, *P. Robinette, K. Jerath, R. Azadeh*; Relational Q-Functionals: Multi-Agent Learning to Recover from Unforeseen Robot Malfunctions in Continuous Action Domains. *In proceeding 21st International Conference on Ubiquitous Robots (UR), New York, USA, pp. 251–256, Jun. 24-27, 2024.*

2023 ***Y. Findik***, *P. Robinette, K. Jerath, R. Azadeh*; Impact of Relational Networks in Multi-Agent Learning: A Value-Based Factorization View. *In proceeding 62nd IEEE Conference on Decision and Control (CDC), Marina Bay Sands, Singapore, pp. 4447-4454, Dec. 13-15, 2023.*

2023 ***Y. Findik***, *H. Osooli, P. Robinette, K. Jerath, R. Azadeh*; Influence of Team Interactions on Multi-Robot Cooperation: A Relational Network Perspective. *In proceeding IEEE International Symposium on Multi-Robot and Multi-Agent Systems (MRS), Boston, MA, pp. 50–56, Dec. 4-5, 2023*.

2023 ***Y. Findik***, *P. Robinette, K. Jerath, R. Azadeh*; Collaborative Adaptation: Learning to Recover from Unforeseen Malfunctions in Multi-Robot Teams. *MADGames workshop at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Detroit, MI, USA, pp. 1–6, Oct. 1-5, 2023.*

2022 ***Y. Findik***, *F. Pourkamali-Anaraki*; D-CBRS: Accounting for Intra-class Diversity in Continual Learning. *The 29th IEEE International Conference on Image Processing (ICIP), Bordeaux, France, pp. 2531–2535, Oct. 16-19, 2022*.

2021 ***Y. Findik***, *H.A. Boz, B. Bozkaya, S. Balcisoy*; Facilitating Decision Making with Multimodal Interfaces in Collaborative Analytical Sessions. *In Textbook of Intelligent Scene Modeling and Human-Computer Interaction. Human-Computer Interaction Series. Springer, Cham, Jun. 2021*.

2019 *E. Yildiz and* ***Y. Findik***, Question Similarity Detection in Turkish Using Semantic Textual Similarity Methods. *In proceeding 27th IEEE Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, pp. 1-4, Apr. 24-26, 2019.*

2019 *M. Bahrami,* ***Y. Findik****, B. Bozkaya, S. Balcisoy*, Twitter Reveals: Using Twitter Analytics to Predict Public Protests.

2018 *E. Kaya, S. Alacam,* ***Y. Findik****, S. Balcisoy*, Low-fidelity Prototyping with Simple Collaborative Tabletop Computer-aided Design Systems. *Computers & Graphics, Feb. 2018.*

Teaching Experience

Teaching Assistant, Sabanci University *Istanbul, Turkey.*

Spring 2020 **Introduction to Computing** *Held lab sessions, 3 hours per week. Graded quizzes and exams.*

Spring 2019 **Introduction to Computing** *Held lab sessions, 3 hours per week. Graded quizzes and exams.*

Fall 2018 **Computer Graphics** *Held lab sessions, 2 hours per week. Supervisor of 50 students' projects. Graded progress reports/codes. Gave feedback to each group for further steps in the project.*

Spring 2018 **Introduction to Computing** *Held lab sessions, 3 hours per week. Graded quizzes and exams.*

Fall 2017 **Introduction to Computing** *Held lab sessions, 3 hours per week. Graded quizzes and exams.*

Spring 2017 **Introduction to Data Science** *Supervisor of 40 students' projects. Graded progress reports/codes. Gave feedback to each group for further steps in the project.*

Fall 2016 **Introduction to Computing** *Held lab sessions, 3 hours per week. Graded quizzes and exams.*

Honors & Awards

2018-2021 **Sabanci University PhD Scholarship** *Excellence Scholarship awarded by the Sabanci University for doctoral studies (tuition and stipend)*

2016-2018 **Sabanci University MS Scholarship** *Excellence Scholarship awarded by the Sabanci University for master studies (tuition and stipend)*

May 2016 **GBYF (Young Brains New Ideas) Second Place Award** *My undergrad thesis won the second place among 250+ theses in Izmir.*

2012-2016 **Dean's List** *Every semester*

2011-2016 **National Scholarship** *Excellence Scholarship awarded by the Turkish government (stipend)*

Languages

Turkish

English

References

Academic and professional references will be provided upon request.