

Parnian Shahkar

Education

University of California, Irvine <i>Ph.D. in Computer Science</i>	Irvine, CA, USA <i>Aug. 2022 – present</i>
Swiss Federal Institute of Technology (ETH Zurich) <i>M.Sc. in Technology, Economics and Management</i>	Zurich, Switzerland <i>Sep. 2020 – Aug. 2022</i>
Sharif University of Technology <i>B.Sc. in Electrical Engineering (minor in Computer Science)</i>	Tehran, Iran <i>Sep. 2015 – Aug. 2020</i>

Research Experience

Department of Computer Science, University of Illinois at Urbana-Champaign <i>Visiting Researcher, Host: Prof. Ruta Mehta</i>	Champaign, IL, USA <i>Jul. 2024 – Sep. 2024</i>
<ul style="list-style-type: none">Fair division, algorithm design under uncertainty, and incentive design for federated learning.	
Department of Computer Science, University of California, Irvine <i>Doctoral Research Assistant, Supervisor: Prof. Ioannis Panageas</i>	Irvine, CA, USA <i>Aug. 2022 – Present</i>
<ul style="list-style-type: none">Algorithm Design.	
Innovation and Policy Lab, ETH Zurich <i>Master's Thesis, Supervisor: Prof. Hans Gersbach</i>	Zurich, Switzerland <i>Sep. 2021 – Aug. 2022</i>
<ul style="list-style-type: none">Investigated new consensus mechanisms for proof-of-stake blockchains, focusing on the effects of free vote delegation.	
KOF Swiss Economic Institute, ETH Zurich <i>Research Assistant, Supervisors: Prof. Martin Wörter and Prof. Michael König</i>	Zurich, Switzerland <i>Feb. 2021 – Feb. 2022</i>
<ul style="list-style-type: none">Analyzed the economic consequences of the COVID-19 pandemic in Switzerland using web-crawling and text-mining.	
System's Control and Robotics Department, KTH Royal Institute of Technology <i>Research Intern on Learning for Control Systems, Supervisor: Prof. Karl Henrik Johansson</i>	Stockholm, Sweden <i>Jun. 2019 – Sep. 2019</i>
<ul style="list-style-type: none">Modeled spiking neurons' gap junctions as voltage-dependent conductances and compared this approach to a constant conductance model.	
Advanced Communications Research Institute, Sharif University of Technology <i>Bachelor's Thesis on Deep Learning, Supervisor: Prof. Babak Khalaj</i>	Tehran, Iran <i>Aug. 2018 – Jun. 2019</i>
<ul style="list-style-type: none">Developed methods for efficient representation of drug data inspired by natural language processing.Implemented a recurrent neural network for predicting chemical properties of drugs.	
Ambient Intelligence Research (A.I.R) Lab, Sharif University of Technology <i>Research in Machine Learning for Computer Vision, Supervisor: Prof. Karbalaee Aghajan</i>	Tehran, Iran <i>Oct. 2017 – Feb. 2018</i>
<ul style="list-style-type: none">Implemented an SVM classifier with HOG features for motion tracking and action recognition.	

Professional Experience

Cafebazaar Company (Divar Online Advertising Company) <i>Data Science Intern</i>	Tehran, Iran <i>Jun. 2018 – Sep. 2018</i>
<ul style="list-style-type: none">Developed a natural language processing (NLP) model to classify user advertisements from raw text.	

Technical Skills

Programming: Python, Java, C/C++, MATLAB, R, TensorFlow, OpenCV, Stata, AVR Assembly, C

Software: Brian2, NEURON, ModelSim, OrCAD PSPICE, Synopsis HSPICE, Altium Designer

Languages: Persian (Native), English (Fluent, TOEFL 111), French (A2), German (A1)

Honors & Awards

2022: Ph.D. Scholarship, University of California, Irvine, CA, USA

2019: 1st Place, Siemens Challenge, HackZurich Competition, Zurich, Switzerland

2019: Best Summer Research Intern, System's Control and Robotics Department, KTH Royal Institute of Technology, Stockholm, Sweden

2015: 57th among 180,000+ students in the National University Entrance Exam – Math and Physics, Tehran, Iran

2016: Finalist, 2nd MakeAthon (Making Marathon) Competition, Sharif University of Technology, Tehran, Iran

2015: Undergraduate grant recipient, Iran's National Elite Foundation, Tehran, Iran

2015–2020: Member, National Elite Foundation of Iran; Exceptional Talents Foundation of Iran