Parnian **Shahkar**

📱 (+1) 9497716663 | ✉ shahkarp@uci.edu | in https://www.linkedin.com/in/parnian-shahkar/ | Birth Date: 1997/2/6 | Sex: Female

Education

University of California, Irvine   *Irvine, CA, USA*
GRADUATE STUDENT IN COMPUTER SCIENCE   *Aug. 2022 - present*

Swiss Federal Institute of Technology - ETH Zurich   *Zurich, Switzerland*
M.SC IN TECHNOLOGY, ECONOMICS AND MANAGEMENT   *Sep. 2020 - Aug. 2022*

Sharif University of Technology   *Tehran, Iran*
B.SC IN ELECTRICAL ENGINEERING **MINORED** WITH COMPUTER SCIENCE   *Sep. 2015 - Aug. 2020*

Research Experiences

Department of Computer Science at University of Illinois Urbana Champaign   *Champaign, Il, USA*
VISITING RESEARCHER, HOST: PROF. RUTA MEHTA   *July. 2024 - Sep. 2024*
- Fair Division, Algorithm Design under Unvertainty, Incentive Design For Federated Learning

Department of Computer Science at University of California, Irvine   *Irvine, CA, USA*
DOCTORAL RESEARCH ASSISTANT, SUPERVISOR: PROF. IOANNIS PANAGEAS   *Aug. 2022 - Present*
- Algorithmic Design

Innovation and Policy Lab at ETH Zurich   *Zurich, Switzerland*
MASTER'S THESIS ON NEW CONSENSUS MECHANISMS FOR PoS BLOCKCHAINS, SUPERVISOR: PROF. HANS GERSBACH   *Sep. 2021 - Aug. 2022*
- Studying the effect of free vote delegation in proof-of-stake blockchains

KOF Swiss Economic Institute at ETH Zurich   *Zurich, Switzerland*
RESEARCH ASSISTANT UNDER THE SUPERVISION OF PROF. MARTIN WÖRTER AND PROF. MICHAEL KÖNIG   *Feb. 2021 - Feb. 2022*
- Examining the economic consequences of the Covid-19 pandemic in Switzerland using web-crawling and text-mining tools applied to company websites

System's Control and Robotics department at KTH Royal Institute of Technology   *Stockholm, Sweden*
RESEARCH INTERN ON LEARNING FOR CONTROL SYSTEMS, SUPERVISOR: PROF. KARL HENRIK JOHANSSON   *June. 2019 - Sep. 2019*
- Modeling the spiking neurons' gap junctions as voltage-dependent conductances and comparing this approach's effect on synchronization to a constant conductance model

Advanced Communications Research Institute at Sharif university of Technology   *Tehran, Iran*
BACHELOR'S THESIS ON DEEP LEARNING, SUPERVISOR: PROF. BABAK KHALAJ   *Aug. 2018 - June 2019*
- Proposing methods for efficient representation of drug data by inspiration from natural language processing models
- Implementing a Recurrent Neural Network for predicting the chemical properties of drugs

Ambient intelligence research(A.I.R) Lab at Sharif University of Technology   *Tehran, Iran*
RESEARCH ON MACHINE LEARNING IN COMPUTER VISION, SUPERVISOR: PROF. KARBALAI AGHAJAN   *Oct. 2017 - Feb. 2018*
- Implementing an SVM classifier with HOG features, for motion-tracking and action-recognition

Robust Popular Matchings
PROCEEDINGS OF THE 23RD INTERNATIONAL CONFERENCE ON AUTONOMOUS AGENTS AND MULTIAGENT SYSTEMS
(AAMAS 2024)

Leximin and Leximax Fair Core Imputations for the Max-Flow, MST, and Bipartite b-Matching Games
SUBMITTED TO THE 16TH INNOVATIONS IN THEORETICAL COMPUTER SCIENCE (ITCS 2025)

Professional Experiences

Cafebazaar company   *Tehran, Iran*
DATA SCIENCE INTERNSHIP IN R&D SECTION OF DIVAR(AN ONLINE ADVERTISING COMPANY)   *June. 2018 - Sep. 2018*
- Implementing a natural language processing (NLP) model that uses raw text from user ads and classifies them

Computer Skills

Programming Language and Platforms

PYTHON, JAVA, C/C++, MATLAB, R, TENSORFLOW, OPENCV, STATA, AVR ASSEMBLY AND C

Simulation and Design Software

BRIAN2, NEURON, MODELSIM, ORCAD PSPICE, SYNOPSIS HSPICE, ALTIUM DESIGNER

Languages

Persian   **English**   **French**   **German**

NATIVE   FLUENT   A2 LEVEL   A1 LEVEL
- **TOEFL score: 111**

Honors & Awards

2022	**PhD Scholarship**, University of California, Irvine	*Irvine, CA, USA*
2019	**1st place**, **Siemens** challenge, HackZurich competition 2019	*Zurich, Switzerland*
2019	**1st Place**, among all summer research interns in the System's Control and Robotics department of KTH Royal Institute of Technology	*Stockholm, Sweden*
2015	**57th among 180'000+ students**, National University Entrance Exam- Math and Physics	*Tehran, Iran*
2016	**Finalist**, 2nd MakeAthon(Making Marathon) competition at Sharif University of Technology	*Tehran, Iran*
2015	**Recipient**, of the grant for undergraduate students, courtesy of Iran's National Elite Foundation	*Tehran, Iran*
2015-2020	**Member**, of National Elite Foundation of Iran	*Tehran, Iran*
2015-2020	**Member**, of Exceptional Talents Foundation of Iran	*Tehran, Iran*

Extracurricular Activities

2018	**Teaching Assistant**, for several undergraduate courses at Sharif University of Technology	*Tehran, Iran*
2017	**Deputy Director**, of the Electrical Engineering Department's Scientific Society	*Tehran, Iran*
2017	**Guide of Hungarian team in IOI2017**, International Olympiads in Informatics held in Tehran	*Tehran, Iran*
2016	**Designing questions**, for the Mathematics and Physics sections of Ghalamchi examinations, with more than 20'000 participants.	*Tehran, Iran*
2016	**Teacher**, of Mathematics and physics at Kooshesh High school	*Tehran, Iran*