

# SARVAR ABDULLAEV

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## PROFILE

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- I would like to use game theoretic principles for analysing evolutionary dynamics of biological ecosystems, and apply these findings for solving the problems of climate change and agriculture.
- So far, I have designed a double auction for trading European options and developed pest outbreak prediction models using climate data and moth images from pheromone traps.

## EDUCATION

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<b>King's College London</b> (UK), PhD in Computer Science	2011-2016
<b>Dongguk University</b> (S.Korea), MSc in Computer Science (GPA - 4.38/4.5)	2007-2009
<b>University of Westminster</b> (UK), BSc in Business Computing (2:1)	2003-2006

## EXPERIENCE

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**Inha University in Tashkent** 2016-Present  
*Assistant Professor*

- Taught courses such as Intro to Computer Science, Game Theory, Creative Engineering Design, Databases, Java Programming. Overall course evaluation result is above 90%.

**King's College London** 2014-2015  
*Teaching Assistant*

- Conducted tutorials on Intro to Artificial Intelligence, Data Structure and Practical Programming.

**Westminster International University in Tashkent** 2009-2011  
*Lecturer*

- Taught courses such Software Engineering, Web Programming and Business Information Systems.

**cBizSoft, Inc** 2008-2023  
*Software Developer (Remote Work)*

- Developed Exelare ATS from scratch using .NET and Angular technologies. It pulls resumes and jobs from Monster, CareerBuilder, Indeed, Dice, Fieldglass and matches them using NLP.

## SELECTED PROJECTS

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### **Spatial-Temporal Interpolation of Air Pollution in Tashkent Metropolitan Area**

- Designed and deployed 10 air pollution stations across the city; analysed the impact of urban traffic, wind speed and other climate data on pollutant concentrations such PM1.0, PM2.5 and PM10.0.

### **Pest Outbreak Prediction using Climate Data and Smart Pheromone Traps**

- Designed and deployed more than 30 agro-weather stations and 12 smart pheromone traps across Ferghana valley; implemented moth counting model and used its data to determine biofix date for degree-day computation of moth's development stage. Funded by UN ACCRF Project.

### **Model-based Control of Natural Gas Usage in Greenhouses**

- Designed a sensor network for monitoring the use of natural gas while heating greenhouses; analysed the impact of solar radiation, outdoor/indoor temperature and humidity, wind speed, ventilation to the heating efficiency; generated operational recommendations.

## SELECTED PUBLICATIONS

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- Pricing Options with Portfolio-holding Trading Agents in Direct Double Auction, *In Proc. of 22nd European Conference on Artificial Intelligence*, Hague, Netherlands, September 2016.
- Emergence of Option Prices in Markets Populated by Portfolio-Holders, *In Proc. of 2nd European Workshop on Chance Discovery and Data Synthesis*, Hague, Netherlands, September 2016
- Direct Exchange Mechanisms for Option Pricing, *In Proc. of 12th European Conference on Multi-Agent Systems*, Springer LNAI, Prague, Czech Republic, December 2014
- An Optimization of CDN using Efficient Load Distribution and RADS Caching Algorithm, *Journal of Universal Computer Science*, Vol. 14, No. 14, pp. 2329-2342, 2008

## CONSULTANCY

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### New Uzbekistan University

2022

- Designed the curriculum of Computer Science program, participated in faculty recruitment, arranged 3D printing and VR/AR labs at the university campus. Taught *Nand2Tetris* course.

### Open Data Challenge Hackathon

2016-2020

- Facilitated the organization of annual event aimed at promoting the use of open data among developers; conducted workshops and tutorials on ML; mentored participants in their projects.

## AWARDS

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IsDB Scholarship for Sustainable Agriculture

2022

Best Paper Award in BigDAS

2017

Winner of TechCrunch Disrupt Hackathon (London, UK)

2014

IsDB Merit Scholarship for High Technology

2011

Global Korea Scholarship

2007

3rd place in ICPC in Uzbekistan

2005

## SKILLS

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### Programming

C#, Angular, Python, Laravel/PHP, Java, SQL, Flux, Arduino/C++  
NetLogo, R, MATLAB, AMPL,  $\text{\LaTeX}$

### Mathematics

Calculus, Probability, Statistics, Linear Algebra,  
Integer Linear Programming, Differential Equations, Game Theory

## CERTIFICATES

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Deep Reinforcement Learning, EEML Summer School, Warsaw

2020

Bayesian Machine Learning, DeepBayes Summer School, Moscow

2018

Entrepreneurship for Scientists, Enterprisers Summer School, Cambridge

2012