

# Soheil Zibakhsh

COMPUTER ENGINEERING · STUDENT

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## Education

### University of Tehran

B.S. IN COMPUTER ENGINEERING

Tehran, Iran

2018 - Exp. 2022

- GPA of 4/4
- Relevant Courses: Crypto Currency(100/100) - Advanced Programming(100/100) - Data Structures(100/100) - Operating Systems(99/100)- Probability and Statistics(100/100) - Artificial Intelligence(98/100) - Database Design(99/100) - Algorithms Design(90/100)

### Allame Helli Tehran

DIPLOMA IN MATHEMATICS AND PHYSICS GPA : 4/4

Tehran, Iran

2014 - 2018

- As a part of the National Organization for Development of Exceptional Talents (NODET)

## Research Interests

- Blockchain Technology
- Algorithm Design
- Theoretic Computer Science
- Data Analysis and Data Mining
- Graphs and Mathematics
- Operating Systems and Distributed Systems
- Statistics Process and Optimization
- Artificial Intelligence

## Skills

**Programming** Python, C/C++, SQL, JAVA, Verilog, Solidity, Shellsript

**Technology** Blockchain, Ethereum, Lightning Networks, ML, Git, Jupyter Notebook, Oracle, Makefile

**Operating Systems** Linux(Ubuntu), Microsoft Windows

## Research and Work Experience

### Research assistant on Bitcoin Lightning Networks

UNIVERSITY OF TEHRAN DATA LAB

University of Tehran, ECE

Jan. Apr 2021 - PRESENT

- Conducting a research on the evaluation of Bitcoin Lightning Networks.
- The research is being done under the supervision of [Dr.B.Bahrak](#) and [Dr.P.Shariatpanahi](#)

### Apex Developer and designer

UNDER SHAZAND PETRO CHEMICAL

Shazand Petro Chemical

Jan 2020 - 2021

- Developing and designing the system for load and unload using Oracle apex.

### Intern in Multi Media Lab

UNDER SUPERVISION OF [DR.HASHEMI](#)

University of Tehran

summer 2019

- Tried to develop a test bench for testing video streaming using mininet.

## Teaching Experience

### Teaching assistant in Advanced Programming

UNDER SUPERVISION OF [DR.R.KHOSRAVI](#)

University of Tehran

Jan. 2020 - PRESENT

- Responsible with designing and implementing and grading projects and assignments and exams.

### Teaching assistant in Database and systems

UNDER SUPERVISION OF [DR.A.SHAKERY](#)

University of Tehran

2021- PRESENT

- Responsible with designing and grading homework assignments and helping students if needed

### Teaching assistant in Engineering Probability and Statistics

UNDER SUPERVISION OF [DR.B.BAHRK](#)

University of Tehran

2020

- Responsible with designing and grading homework assignments and helping student if needed.

### Teaching assistant in Introduction to Computing Systems and Programming

UNDER SUPERVISION OF [DR.H.MORADI](#)

University of Tehran

2021

- Responsible with designing and implementing and grading projects and assignments and exams.

## Publications

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### Modeling Effective Lifespan of Payment Channels

SOHEIL ZIBAKHSH, MAHDI HOSSEINI, PROF.BEHRAN BAHRAK, PROF.POOYA SHARIATPANAH

*Under Preparation*

2021

In this paper we developed a mathematical model to predict the expected effective lifespan of each channel based on the network's topology and payment size.

### Scalable Decentralized Systems : A Survey

SOHEIL ZIBAKHSH

*Under Preparation*

2021

Scalable decentralized system that includes both the cutting-edge consensus algorithms (the proof of stake or delegated proof of stake) and the layer-2 technologies

## Honors & Awards

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2018-2021 **Ranked first at the University of Tehran**, among all Computer Engineering students.

2017 **Silver medal**, in the 30th Iranian National Olympiad in physics.

2018 **Ranked**, Top 0.6% national-wide university entrance exam

2017 **Becoming a member**, of Iran's National Elites Foundation (NODET)

2018 **Scholarship**, Received from the University of Tehran Sponsors Foundation as an exceptional talent student.

## Remarkable Academic Projects

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### Blockchain Splitwise(<https://github.com/soheilzi/Blockchain-Splitwise>)

A PROJECT ON DESIGNING AND IMPLEMENTING ETHEREUM SMART CONTRACTS.

*Crypto Currency Course*

2021

### Sophia Compiler([https://gitlab.com/soheilzi/compiler\\_p4/-/tree/master](https://gitlab.com/soheilzi/compiler_p4/-/tree/master))

A COMPILER FOR NEW OBJECT ORIENTED LANGUAGE CALLED SOPHIA.

*Compiler design Course*

2020

### XV6 OS(<https://gitlab.com/Shayunak/os-lab5>)

MODIFIED SYSTEM CALLS, CPU SCHEDULING, MEMORY MANAGEMENT, SHORTCUTS, SYNCHRONIZATION AND CONCURRENCY.

*Operating Systems Course*

2020

### Multithread Price Estimator(<https://gitlab.com/soheilzi/os-project3>)

USING MULTITHREADING TO SPEED UP ESTIMATOR IN C++.

*Operating Systems Course*

2020

### Image Classifier(<https://github.com/soheilzi/Image-classifier>)

TWO PROJECTS ONE MAKING A NN GROUND UP, ONE USING TENSORFLOW.

*Artificial Intelligence Course*

2021

### Two Layer Switch Network([https://github.com/soheilzi/twolayer\\_switch\\_simulator](https://github.com/soheilzi/twolayer_switch_simulator))

IMPLEMENTING A SWITCH NETWORK WITH IPC AND MULTITHREAD PROGRAMMING.

*Computer Networks Course*

2021

### Dots and Boxes Over Localnet(<https://gitlab.com/soheilzi/dots-and-boxes>)

A SERVER THAT CREATES GAMES OF 2 TO 4 PLAYERS OVER LOCALHOST OVER UDP AND TCP.

*Operating Systems Course*

2020

### Mips Pipeline Processor([https://gitlab.com/soheilzi/computerarchitecture\\_project4](https://gitlab.com/soheilzi/computerarchitecture_project4))

A PIPELINE PROCESSOR WAS FULLY DESIGNED AND IMPLEMENTED USING VERILOG.

*Computer Architecture Course*

2020

## Languages

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**English** Advanced - TOEFL: 113/120 [R:30, L:30, S:29, W:24]

**Deutsch** Beginner

**Persian** native

## References

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- Available upon request