

# Shayan Hamidi Dehshali

COMPUTER ENGINEERING · STUDENT

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## Education

### University of Tehran

Tehran, Iran

BSC. IN COMPUTER ENGINEERING

2018 - Present

• GPA : 4/4

• Relevant Courses:

Artificial Intelligence(100/100)

Operating systems(100/100)

Computer Networks(88/100)

Crypto Currencies(98/100)

Database Design(100/100)

Network Security(95/100)

Advanced Programming(100/100)

Software Testing(97/100)

Distributed Systems(95/100)

### Allame Helli Tehran

Tehran, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS

2014 - 2018

• GPA: 4/4

• An active participant of the Annual Helli Seminars

• A member of National Physics Olympiad team

## Research Interests

- Blockchain Technology and Cryptography
- Artificial Intelligence and Machine Learning
- Software Engineering

- Distributed Systems
- Network Security
- Cyber-physical systems

## Skills

### Programming

C/C++, Java, Python, C#, PHP, ShellScript, Solidity, Kotlin, Erlang, Verilog, R, Go, HTML/CSS

### Paradigms

Relational Database Systems, NoSQL Database Systems, xUnit-based Testing, BDD and UI Testing, Dependency Injection, Git(Version Control), CI/CD, Scrum tools, Web-server, REST-API Design

### Tools

Jupyter Notebook, Android Studio, Remix, IntelliJ IDEA, ModelSim, Xilinx Vivado, Quartus

### Operating Systems

Ubuntu Linux, Kali Linux, Microsoft Windows

## Research and Work Experience

### Research assistant on Blockchain

University of Tehran, ECE

UNIVERSITY OF TEHRAN DATA LAB

Dec 2021 - Present

- Conducting research on the classification of bitcoin addresses and the limit on the throughput of the Lightning Network
- The research is being done under the supervision of [Dr.B.Bahrak](#) and [Dr.P.Shariatpanahi](#)

### Full stack developer

Startup

DATASERVICES, PART-TIME

Oct 2020 - Dec 2021

- I have been part of a vanguard startup working on a data sharing platform. We took the privacy and GDPR to the heart of the design while incentivizing each individual's contribution favoring a platform embracing humanistic information economy.

### .NET Desktop Application developer

Remote

MOBTAKERAN PARS ANDISH, PART-TIME

March 2021 - Dec 2021

- My primary goal was to develop an application with user-friendly UI enabling interaction with the sensors, which use specific data transmission protocols. The sensors were also designed to measure the condition of engine(eg. temperature, pressure, torque).

## Teaching Assistance Experience

### Teaching assistant in Crypto Currencies

University of Tehran

UNDER SUPERVISION OF [DR.P.SHARIATPANAHI](#)

Feb. 2022 - July 2022

### Teaching assistant in Operating Systems

University of Tehran

UNDER SUPERVISION OF [DR.KARGAHI](#)

Oct. 2021 - Dec. 2021

## Teaching assistant in Compiler and Programming Languages Design

UNDER SUPERVISION OF [DR.GHASEMI](#)

University of Tehran

Oct. 2021 - Dec. 2021

## Teaching assistant in Formal Languages and Automata

UNDER SUPERVISION OF [DR.HOJJAT](#)

University of Tehran

Jan. 2021 - Jun. 2021

## Teaching assistant in Introduction to Computer Systems Programming

UNDER SUPERVISION OF [DR.MORADI](#)

University of Tehran

Oct. 2020 - Dec. 2021

## Extracurricular Activity

- Lean Startup Workshop
- Scaled Agile Framework(SAFe) Workshop
- $\text{\LaTeX}$  Workshop
- Design Thinking Workshop

## Publications

### Throughput Limitation of the Off-chain Payment Networks

SHAYAN HAMIDI DEHSHALI, SEYED MAHDI HOSSEINI, SOHEIL ZIBAKSH SHABGAHI, BEHNAM BAHRAK

Under Preparation

2022

In this paper, we propose a mathematical model to formulate limitation on the throughput of an off-chain payment network.

## Honors & Awards

- |      |   |                             |
|------|---|-----------------------------|
| 2021 | <b>Ranked 13th in National Bachelor's Olympiad</b> , among all Computer Engineering students of the country | <i>Sanjesh org.</i>         |
| 2022 | <b>Ranked third in my major</b> , among all Computer Engineering students of the university                 | <i>University of Tehran</i> |
| 2018 | <b>Ranked 108th in Iran National Konkur</b> , top 0.01% nation-wide university entrance exam                | <i>Sanjesh org.</i>         |
| 2017 | <b>Qualified for second round of National Physics Olympiad</b> , among all participants of the country      | <i>Olympiad org.</i>        |

## Remarkable Academic Projects

### EVM: Blockchain-Splitwise([On Github](#))

IMPLEMENTED A DEBT SYSTEM WITH SMART CONTRACTS BY SOLIDITY OVER GANACHE VIRTUAL ETHEREUM CHAIN SIMULATOR.

*Crypto-currencies course*

June 2021

### CA-Crypto: Crypto-Currency Project([On Github](#))

I TRIED TO MINE BITCOIN BLOCK, GENERATE DIFFERENT KINDS OF ADDRESSES, AND MAKE P2PKH,P2SH,P2WPKH,SEGWIT TRANSACTIONS ALL ON THE TESTNET. IMPLEMENTED BY PYTHON.

*Crypto-currencies course*

May 2021

### AI: Image Classifier([On Github](#))

CLASSIFIED IMAGES OF PERSIAN NUMBERS BY A MANUALLY-IMPLEMENTED NEURAL NETWORK MODEL. DEVELOPED BY PYTHON.

*Artificial Intelligence course*

June 2022

### Film-Rental:HTTP([On Github](#))

THIS IS A WEB-APPLICATION FOR FILM RENTERS AND FILM PRODUCERS BASED ON NETFLIX. IMPLEMENTED BY C++.

*Advanced Programming course*

June 2019

### XV6: Operating System([On GitLab](#))

A MODIFICATION OF XV6 OPERATING SYSTEM WITH SO MANY FEATURES ADDED.

*Operating Systems course*

November 2020

## Languages

- |                |  |
|----------------|--|
| <b>English</b> | Advanced - TOEFL: 106/120 [R:30, L:29, S:22, W:25] |
| <b>German</b>  | Elementary   |
| <b>Persian</b> | Native   |

## References

- Available upon request