Mohammad Matin Ghiasvand(k3rn3lpanic)

ABOUT ME

Someone who loves to code, think and solve problems.

From young age, I was fascinated with a lot of fields in computer world, and tried my best to learn them one-by-one.

I started to code (C++) when I was 12, and throughout my journey I have learned a lot in multiple important fields including:

o Machine Learning

o Computer Vision

o Decentralized Networks & Blockchain

o Backend Development

o Network & Security

CONTACT ME

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Telegram

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Education

Allameh Helli Tehran (gifted highschool)
2018 - 2021

I have Studied **Mathematics** in highschool and became **150th** in Iran's University Entrance Exam

Computer Engineering at Amirkabir-University of Technology
2021 - now

I study my 4th semester of Computer Engineering in Amirkabir University of Technology.
Also I've been **TA (Teacher Assistant)** in 2 courses :
   - *Basic Programming* (C language)
   - *Object-Oriented Programming* (Java)

Work Experience

Smart-Contract & Backend Developer at Droplinked
2022 - NOW

I'm working in Droplinked, as a Blockchain & Backend Developer. My Job is to write efficient Smart-Contracts on multiple blockchains, and help the backend and front-end team to build tools and integrations on those networks and build tools to interact with my contract, Also adding support for multiple chain's payment and wallet integration.

Machine Learning Developer at Roshan-AI
2022 - 2022

I have worked as a trainee **AI-Developer** on some parts of Roshan-AI projects.

I was involved in *"Classify a single line in a Persian newspaper page as heading/sub-heading/paragraph as fast as possible"*.

Freelancer
2019 - 2021

Skills

-***Programming Languages***(sorted based on knowledge and experience) :
   Python - **C#** - **Rust** - **Java** – **C/C++ |** new to : php – JavaScript
-*Database Systems* (sorted based on experience working with):
   Sqlite3 – MySQL – Redis – Elasticsearch
-**Linux** : I took a LPIC1 course, also I'm ubuntu user for 5 years.
-**Machine Learning & Computer Vision**
   Classical ML algorithms : RandomForest-gradient boosting-NN-...
   Deep Neural Networks : ***MLP*** *– **CNNs** -* and ...
   Deep Learning/Computer Vision Libraries :
   Deep knowledge of Image processing transformations and their usage
      - *Pytorch* :
      - *Tensorflow* :
      - *OpenCV* :

-**Blockchain** : Currently working on a project named Decentralized programming Platform which is based on blockchain and related things. Also, I've written Smart contracts using Rust, for `Casper` & `Near` networks & Build Integration tools for them.

-**Security** : I've taken networking courses and I'm familiar with most known attack scenarios, top 10 OWASP bugs and a lot of **Kali-Linux**'s tools.

💻 Programming Experience

Languages

Python (more than 5 years experience) : Deep knowledge, I've used it for *AI*, *Computer vision*, *Telegram Bot*, as a web framework (*Django*), and ... . Some of my python projects : PythonSocketFileSharing, PolyTechBit Bot, NeuralNetworkFromScratch, InvisibleCloak, ...

C# (more than 5 years experience) : I used C# as a Desktop (for windows) development and client for my projects. It was my first language for years and I master it (I know it's ecosystem (*Threading*, *Async programming*, *Linq*, ...) , I've not worked with .NetCore or ASP.NET but I'm an expert in using C# with *.NetFramework* for Desktop and client development. I've implemented my own library (capable of doing almost everything in windows), I've written a RAT(Remote Access Trojan) and a controller for it using my own library. I've a lot of experience developing viruses and trojans for windows with C#.

C/C++ (more than 7 years experience of coding with C++) : C++ was the language with which I started to learn coding, I have a good knowledge of using C++ and how to use some libraries (*SDL* for example) with it. I started learning C in university and this is my final project. I've implemented a lot of physics simulations with C++ in this repository.

Java (more than 3 years of experience) : I've learned *OOP*, *Design Patterns*, *Multi-Threading*, and *Socket programming* with Java. I have a strong knowledge using *JavaFx*, I implemented a program similar to Discord with Java and Javafx, It's capable of Voice call (and group voice call) , Screen Share (and group Screen Share) and other things that a messenger app should have.

Rust (over 2 years of experience) : I'm using Rust as memory-safe and blazing fast language for Smart Contract Development, as well as networking tool. I've used Rust as a Smart-Contract Development language on `Casper-Network` & `NEAR Protocol`. Also, I've used rust to create a simple P2PNetwork for my personal project with my team. I've worked with several popular Rust libs like tokio & etc..

Databases

- **Relational Databases** : I have deep knowledge and lots of experience using *RDMS*
    - **Sqlite3** : I've used Sqlite3 as local database for a lot of my projects

    - **MySQL** : I've used MySQL in some of API's I've written in PHP and other languages, Also I've used MySQL as backend's database in one of my C# Applications.

    - **Microsoft SQL Server** : I've used MSSQLServer only as my C# application's database.

- **Non-Relational Databases (NoSQL)** : I've experience of working with *JSON* in multiple languages, Also I have experience installing, tweaking and working with *elasticsearch* as a database and search engine for full text search in huge amount of data (in medad-ai)

Libraries, Technologies & Frameworks

- **Python** (sorted) : *Pytorch*, *Tensorflow*, *numpy*, *Django*, *OpenCV*, *ScikitLearn*, *matplotlib*, *pndas*
- **Rust** (sorted) : *Tokio*, *Rusqlite*, *Json*, *Redis*
- **Java** (sorted) : *Gson* (for serialize/deserialize objects)
- **c/C++** (sorted): *SDL* (for GUI), *graphics.h*
- **Git**
- **Docker** (newbie)

Linux

I'm a Linux user for more than 5 years (I use Ubuntu).
I have experience working with Linux *Shell*, *bash Scripting*, and managing Services.
Most of the time, I use *VIM* as my code editor, (other times I mostly use vscode).
Also, I've passed a LPIC1 Course, And I'm a huge fan of free software (Stallman)

🤖 Machine Learning Experience

Knowledge

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I started to learn AI & Machine learning when I was in 11th grade in school.
I continued to learn by myself and I entered a lot of fields and parts of machine learning. Here is my knowledge experience :
- **School AI Course** (learned about classic AI, Neural Networks and Keras)
- **Machine Learning Course of Stanford** (Andrew-Ng)
- **Deep Learning Course** (Andrew-Ng)
- **Pytorch for Deep learning**

Now I'm familiar and experienced in classic ML algorithms (**RandomForest**, **Gradient Boosting**, ..) , Deep learning algorithms (**MLP** , **CNNs** , ...) and classic & Deep learning Libraries (**Scikitlearn** , **Pytorch**, **Keras and Tensorflow** , ...)

I've used multiple Python Machine learning libraries :
- **Pytorch**
- **Tensorflow** (and Keras)
- **Scikitlearn**
- **Numpy** (for data manipulations)

Computer Vision : I've knowledge of different image processing techniques (morphology transformations, filters, color spaces, thresholding, contours, ...). I've used Computer vision as preprocessing step in Machine learning tasks, I also have implemented multiple small projects using **OpenCV** (in python and C#) :

- **Invisiblity-Clock** : It will use background subtraction to remove the blue parts of picture and replace them with their background (like an invisible cloak)
- **Fish Tracking** : I used OpenCV in C# to write a fish tracking app, it tracks each red fish (based on color) and saves important data, draws fish-place heatmap and calculates the fishes velocity and ..., It was used in a biological research in school.

Work Experience

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I started a job as a trainee in **Roshan-AI** company for 3 months. I was working on one of company's projects sections and my task was to **"Classify a line in newspaper as a heading/sub-heading or paragraph"**.
I programmed a labeling app (with OpenCV) and downloaded 400 pages of newspapers from 20 different Iranian Newspapers, Labeled them each, and tested both classical Machine learning algorithms and Deep learning techniques, I got fascinating results (more than 90% of Precision and Recall).
It was a great challenge for me and I solved it perfectly.

Projects

- **Basic Neural Network(Java)** : Java implementation of Dense Neural Network
- **CaptchaBreak** : Breaking Amirkabir University's login page captcha using CNN
- **Dense Neural Network from Scratch** : implement from scratch using only numpy
- Control 3D monitor using hand gestures : My 10th grade's research project
- Roshan-AI's project on Iranian Newspaper's heading detection

⁕ Decentralized Networks Experience

Knowledge & Experience

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I started to learn about **decentralized networks**, **blockchain** and **cryptocurrencies** less than a year ago, I've taken a Blockchain Course and also studied some parts of **Bitcoin's** documentations.

I have pretty good knowledge of **P2PNetworks**, and as a team, we are trying to implement a **multi-layered programming platform**, to move a lot of platforms and services in real world, to a decentralized manner of it to ensure that power does not belong to only one node(could be a country or an organization) in network.
We are planning to build a Decentralized social network on top of our project to ensure the right to speak freely and anonymously in the society and also prevent from things like filtering or law prosecution.
It consists of multiple layers, at the moment I'm developing the layer0 (P2PNetwork) using Rust. This is the link to layer0's github page.

✵ Decentralized Networks Experience

Work Experience

I started a job as a blockchain developer in **Droplinked** company since 2022-12-20.
I've worked on smart-contract development using Rust on multiple chains including :
- Casper Network
- NEAR Protocol

Also, I've implemented tools for front-end and back-end of the Droplinked, to
integrate with the wallets of these networks, and use them for payment, affiliate,
And Product Record on blockchain (NFTs), and Token-Gating.
I've used Rust for smart contract part and JS for front-end & back-end part.
Below is the link to all my Activities in this company :

- Casper Contract
- NEAR Contract
- Near front integration
- Droplinked Flows & Charts
- Casper Back & Front Integration
- Standard Droplinked Contract Interface's Docs : flatlay.github.io