Amir Hossein Ebrahimnezhad
The World is my Country, Science my Religion.

Education

BSc. in Physics, University of Tehran | Tehran, Iran *2019-24*

Skills and self-studies

Mathematical self-Studies	Logic *(basic)*, Set Theory *(basic)*, Category Theory *(basic)*
Physics	Quantum Information, Quantum Computation, Foundations of Quantum Mechanics, Standard Quantum Mechanics, General Relativity *(under study)*, Quantum Field Theory *(under study)*
Philosophical self-studies	Philosophy of Quantum Mechanics, Philosophy of Foundations of Physics, Philosophy of Religion
Programming	Kotlin, C/C++, Java, Python, Typescript, Vue.js, Nuxt, Ionic, Mathematica, LaTex
Soft Skills	Time Management, Research Managements, Analytical Problem-solving, Writing, Lecturing

Researches and Academic Experiences

Goedel Incompleteness and the Problem of Measurement *February 2023 - Now*
University of Tehran - self-research

As my undergraduate project, I worked on the problem of measurement and checking its similarities with the incompleteness theorems in mathematics; I pointed to the problem of indeterminacy in both of them. This is still an on going research for myself. Right now I am studying category theory in order to achieve a better understanding of the mathematical structure of the current physical theories and later the structure of what could be the theory of everything; this would help me work on the formal language of such theories and later prove, or disprove the completeness of them.

Numerical solving of TOV Equations *April 2023 - Now*
Co-work with Prof. Moshfegh

I am working with one of my professors in solving the Tolmann Oppenheimer Volkof Equations. Calculating the pressure of neutron stars as a function of their radius based on a given equation of state. This project is trying to write a clear code so that anyone can use it instead of writing one for themselves.

Determinism is Critical to Physical Theories
Paper *Nov 2023*

A draft on determinism and a new point of view for it. Available at my research-gate profile.

Epistemology: A Review on Knowledge
Paper *Apr 2023*

Available at my research-gate profile.

Review on the Problem of Black Body Radiation
Lecture Presentation *Oct 2023*

Available at my research-gate profile.

Programming
Teaching Assistant *Sep 2022*

I taught programming in python to a class of 60 every week, designed assignments and graded them.

Quantum Information and Computation for Master
Teaching Assistant *Feb 2024*

Although I am a bachelor of science. I am teaching quantum information and computation as the teaching assistant of the course in my university.

Order of Quantum Foundations *Aug 2023 - Now*
Self-Organized *University of Tehran*

With a team of four, we have initiated the order of quantum foundations. A weekly seminar and discussion over the foundations of quantum mechanics.

Research and Project Experience

Applications of Genetic Algorithms in Stock Market *Aug 2023 - Now*
Darth Trader

As the founder and manager, with a team of 5 people, I am currently working on the genetic algorithm and Ai usage in the prediction of stock market. Using Kotlin as the main language and a little python. The program is still under development.

Organization Initiation *Nov 2023 - Now*
Independent Society Of Knowledge

Independent Society of Knowledge is a community, focusing of the value of science, and freedom of researchers. The society is working on some projects including:
- Library Development for Kotlin and binding Old libraries from Fortran and C/c++ to it.
- Building enviorments for scientists and philosophers to gain financial benefit from their research.

Front-End Development   *Aug 2023 - Now*
Kar.Center
I joined Kar.center as the junior front end developer. Using Vue.js and Nuxt Framework.

Certificates and Schools

2023	**School of Philosophy**, Institute for Research in Fundamental Sciences (IPM)	*Iran*
2023	**School of Quantum Information and Quantum Gravity**, Institute for Research in Fundamental Science (IPM)	*Iran*
2023	**Introduction to Mathematical Thinking**, Coursera	*Remote*
2022	**Bronze-Qiskit Workshop**, QFrance	*Remote*
2021	**MATLAB Programming**, MPT Academy	*Iran*
2021	**Cs50**, Harvard	*Remote*

Languages

English	C1
Deutsch	B1
Norsk	A1
Persian	Native

Contact

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