

**Masood Nekoie**

## **Personal Statement**

Dear Admission Committee of the Columbia University CS Department,

I am Masood Nekoie, a dedicated student in Canada with an unwavering passion for research and a strong desire to embark on a transformative journey as a PhD student. I am writing to express my profound interest in your esteemed institution and your field of research.

My aspiration to be a prolific researcher has driven me to seek the mentorship of outstanding professors, and Columbia University stands out as the ideal platform for this pursuit. I am particularly captivated by **Professor Henry Yuen, Professor Zemel and Professor Ghaderi** research focus.

My current work involves the implementation of the GWO method to develop the **GWP** approach, aimed at solving **symbolic regression and prediction problems**. This research endeavor has enriched my academic experience and resulted in a publication in a prestigious Machine Learning journal, where I introduced ABCEP as an innovative automatic programming method ([1](<https://doi.org/10.1016/j.ins.2020.09.020> : **Information Science Journal**)). This method, combining ABCP and GEP, required extensive coding, including ABCP, qABCP, qsABCP, sABCP, GP, and GEP, to ensure a fair comparison.

I am well-versed in MATLAB and Python, demonstrated by the extensive code within my published papers, comprising thousands of lines. My master's degree at Amirkabir University of Technology was dedicated to applying these methods to real-world problems, particularly in the field of electrical circuits. My thesis, with a GPA of 3.8/4, delved into "Characterization of complex materials in the THz band using CSRR metamaterial and investigating their behavior through **AI automatic regression methods**."

Furthermore, my proficiency extends to optimization methods, including genetic algorithms, PSO, ABC, Ant colony, and ICA. I possess the capability to hybridize these methods for practical real-world problem-solving.

In addition to my research pursuits, I have a diverse background in electrical engineering, encompassing neural networks, RF design, THz characterization, numerical evaluation of electromagnetic circuits, FPGA programming, quantum computing (currently exploring Hamiltonian simulation), and automatic programming in AI.

I am currently a PhD student at Carleton University with a perfect A+ (4/4 GPA) record in my courses. While Carleton University is strong in various areas, I aspire to be part of Columbia University's academic community to further my ideals.

The prospect of joining your program excites me immensely, and I am highly motivated to contribute to your research community. If there is an opportunity within your group, it would be an honor to be considered.

Best regards,

Masood Nekoie

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