

Muhammad Khalid

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EDUCATION

Grinnell College

B.A. in Computer Science

Grinnell, IA

Class of 2026

- Cumulative GPA: 3.62/4.0, In-major GPA: 3.75/4.0, Deans list Spring 2023 & Fall 2023
- Selected Coursework: Computational Methods, Operating Systems, Data Structures and Algorithms, Object-Oriented Programming

EXPERIENCE

Research Assistant

ELBICA Lab, Grinnell College

May 2024 – Present

Grinnell, IA

- Research Distributed Representations in AI using Reinforcement Learning techniques
- Develop python software that uses multi-modal data and causal inference to make decisions
- Collaborate with a team to explore the latest Neuroscience & AI Research

Software Developer, Intern

10Pearls

June 2023 – Aug. 2023

Karachi, Pakistan

- Developed a fitness-tracking application using Python, Flask, PostgreSQL, HTML/CSS
- Wrote manual tests using in-house testing software to perform quality assurance
- Utilized pandas and Scikit-learn to process data and derive insights

Computer Science Grader

Grinnell College

Sep. 2023 – Present

Grinnell, IA

- Grade 40+ weekly labs, reading assignments, and projects in Java, Racket
- Debug code written by students, providing detailed feedback
- Report student difficulties in weekly meetings to improve teaching methods and course structure

PROJECTS

- [MCMC Cipher Cracker](#) - Full-Stack substitution cipher cracker using Metropolis-Hastings algorithm
- [Gradient Descent](#) - Multi-dimensional minimum-finding method implementation
- [Genetic Data Fitting](#) - Utilized genetic algorithms to fit polynomials to data

EXTRACURRICULAR EXPERIENCE

Pioneer Weekend

Grinnell College

September 2023

Grinnell, IA

- Secured 2nd place in a weekend-long entrepreneurship competition
- Worked with a team to conceptualize and design a college-centric, user-to-user online marketplace
- Implemented generative AI technology using an API to automate the item listing process for a demo

HackGC

Grinnell College

April 2023

Grinnell, IA

- Won 2nd place at a hackathon focused on using technology to fight climate change
- Collaborated with a team to design an application prototype as an MVP
- Created the front-end and basic user functionality for the application using HTML/CSS & JavaScript

TECHNICAL SKILLS

Proficient: Python, Java, C

Familiar: R, TypeScript, Next.js, Git, Django, PostgreSQL, Flask, pandas