Muhammad Khalid

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EDUCATION

Grinnell College Grinnell, IA
*B.A. in **Computer Science*** *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, Data Science

EXPERIENCE

Research Assistant May 2024 – Present
ELBICA Lab, Grinnell College *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 June 2023 – Aug. 2023
10Pearls *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 Sep. 2023 – Present
Grinnell College *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 September 2023
Grinnell College *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 April 2023
Grinnell College *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