

# MUHAMMAD ABDULLAH

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## EDUCATION

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### University of Saskatchewan

Saskatoon, SK

*Bachelor of Science in Computer Science*

*Expected Graduation: 2027*

- Completed core courses including **CMPT 141: Introduction to Computer Science** (problem-solving, control flow, and modular programming in Python) and **CMPT 145: Principles of Computer Science** (functions, testing, and algorithmic design).
- Currently enrolled in **CMPT 214: Programming Principles and Practices** (system-level programming in C, memory management, debugging, and iterative software development with Makefiles and Git).
- Also enrolled in **CMPT 270: Developing Object-Oriented Systems** (Java, UML modeling, GUI design, inheritance, and design patterns).
- Actively seeking a **Software Engineering Internship for Summer 2026**.

## EXPERIENCE

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### Cyber Security Club, University of Saskatchewan

Sep 2025 – Present

*Active Member*

*Saskatoon, SK*

- Participate in Capture-the-Flag (CTF) challenges and penetration-testing workshops to strengthen applied cybersecurity and Linux skills.
- Collaborate on ethical hacking, network analysis, and secure coding sessions focused on applied system defense.

### University of Saskatchewan Computer Science Student Society (CSUS)

Sep 2025 – Present

*Member, Technical Committee*

*Saskatoon, SK*

- Assist with technical setup and event infrastructure for departmental hackathons, workshops, and student-led learning events.
- Collaborate with committee members to design peer-learning sessions on Git, debugging, and programming best practices.

## PROJECTS

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### League of Legends Discord Bot | *Python, JSON, Riot API, Discord.py*

- Developed a Discord bot providing real-time player statistics and match predictions using Riot Games API data.
- Implemented asynchronous API requests and JSON-based storage to handle multiple concurrent users.
- Optimized champion and role weighting logic, improving predictive accuracy across 100 + simulated matches.

### System Resource Monitor | *C, Linux, File I/O, Process Management*

- Built a command-line tool to report CPU usage, memory allocation, and process counts by parsing the Linux `/proc` filesystem.
- Practiced modular C design, dynamic memory allocation, and Makefile automation for compilation and testing.
- Demonstrated debugging, pointer arithmetic, and low-level system I/O in Unix-like environments.

### Student Grade Tracker | *Java, OOP, File Handling*

- Engineered a Java application for recording and averaging student grades through class-based OOP design.
- Integrated file I/O for persistent data storage with validation, error handling, and modular structure.
- Applied inheritance and encapsulation to maintain scalability and clean code organization.

### Pathfinding Visualizer | *Python, Tkinter, Algorithms*

- Created an interactive GUI that visualizes BFS, DFS, Dijkstra, and A\* algorithms on dynamic grids.
- Implemented real-time animation rendering and optimized traversal heuristics for performance.
- Demonstrated strong understanding of data structures and algorithmic reasoning.

## TECHNICAL SKILLS

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**Languages:** Java, Python, C, C++, JavaScript, SQL, HTML/CSS, JSON, Bash

**Frameworks/Tools:** Node.js, JUnit, VS Code, IntelliJ IDEA, Git/GitHub, Linux CLI

**Concepts:** Object-Oriented Design, UML, Version Control, Software Architecture, Testing, Data Structures