

# Faycal Kilali

root@faycalkilali.com | 506-540-1617 | github.com/faycalki | linkedin.com/in/faycal-kilali | faycalkilali.com

## Education

**McGill University** – Accepted for Summer Coursework – Montreal, QC 2025  
**Mount Allison University** – B.Sc. (Hons) Computer Science and Mathematics – Sackville, NB 2022 – 2026

## Certifications

*Machine Learning with Python* – IBM, Coursera 2024  
*Object-Oriented Design* – University of Alberta, Coursera 2024  
*Microsoft Learn AI Skills Challenge* 2023

## Experience

**Fullstack Software Developer**, AI Object Detection Framework and Educational Tool – Sackville, NB May 2024 – Sep 2024

- Led the development of a grant-funded project implementing an AI-based object detection framework, providing an inspiring educational game to users
- Designed and implemented an educational tool using Flask, Tkinter, and Streamlit, improving user experience
- Managed, directed, and developed the project from conception to deployment, verifying the quality of the work and ensuring timely delivery as constrained by the budget and schedule

**Mathematics and Computer Science Peer Tutor**, Mount Allison University – Sackville, NB Mar 2023 – Sep 2024

- Tutored 50+ students across various mathematical subjects, developing customized teaching approaches
- Demonstrated proficiency in teaching and problem-solving, resulting in positive feedback from both students and professors

**Technical Lead**, Greater Dorchester Moving Forward – Dorchester, NB Jan 2023 – Jul 2023

- Spearheaded technical operations for a non-profit organization, overseeing data gathering, mapping, and software development to optimize impact and further mission
- Collaborated with other departments within the organization to integrate technical solutions with broader strategic goals and non-profit values
- Led a team of volunteers and staff members, fostering a positive and productive work environment

## Projects

**Medieval Conquests** 2016 – 2019

- Founded and led a successful Medieval-era module for the popular game "Mount & Blade: Warband," managing a team of volunteer testers and contributors for over a year and a half, achieving a 92% rating on Steam
- Spearheaded the implementation of a wide range of features, including enhanced combat fidelity, improved graphics, and engaging gameplay mechanics, resulting in over 120,000 unique active subscribers and 500,000 unique visitors

**Tainted Paths** 2018 – 2019

- Founded, led development, and managed a diverse team of volunteers for the project
- Achieved impressive results with over 203,000+ unique visitors 34,000+ unique active subscribers, and a positive rating of around 90% in Steam

**Floris Evolved** 2015 – 2016

- Co-developed and Co-founded major game overhaul with 160,000+ active subscribers and over 600,000 unique visitors across platforms
- Managed all aspects of the project, including technical development, project management, and team leadership, culminating to a 95% positive rating on Steam

## Skills

**Programming:** Python, Java, BASH, MBScript, C, MIPS Assembly, RISC-V, LaTeX, Git

**Technologies:** Azure, Linux, Windows

**Domains:** Machine Learning, Logical Agents, Algorithm Analysis, GIS, Systems Programming, Digital Signals and Processing

**Languages:** English (Native), Standard Arabic (Professional), Saudi Arabic (Professional), Darija (Native)

**Paradigms:** Object-Oriented Programming (OOP), Parallel Processing, Procedural, Logic

**Algorithmic Paradigms:** Decrease and Conquer, Divide and Conquer, Greedy, Dynamic Programming

**Mathematical:** Tensor Calculus, Multivariable Calculus, Linear Algebra, Mathematical Modeling, Probability and Statistics, Discrete Structures, Real Analysis

**Coursework:** Data Structures & Algorithms, Algorithm Analysis, Systems Programming, Digital Electronics and Digital Signal Processing, Artificial Intelligence, Simulation and Modeling, Computer Organization & Architecture, Object-Oriented Design, Applied Calculus, Calculus 2, Multivariable Calculus, Vector Calculus, Real Analysis, Linear Algebra, Advanced Linear Algebra, Probability and Statistics, Differential Equations, Discrete Structures, Introduction to Data Science, General Physics I, General Physics II.

## Transferable Skills

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*Leadership:* Led diverse teams to deliver high-quality results, demonstrating strategic vision and inspiration

*Communication:* Mentored 50+ students, simplified concepts, and secured funding through compelling pitches

*Project Management:* Directed large-scale projects with 314,000+ users, ensuring timely delivery and satisfaction

*Problem Solving:* Proved 600+ mathematical propositions, showcasing advanced analytical and logical skills

## Awards

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- **Recipient, Ignite Grant (\$4,000)** – Mount Allison University Entrepreneurship Program Awarded funding to design and prototype a minimalistic medical assistance device leveraging AI and embedded systems. Key aspects:
  - **AI-Driven Solution:** Designed a concept for a Raspberry Pi-powered device capable of recognizing medical issues through voice interaction and providing step-by-step instructions in text and audio
  - **Data Science Integration:** Initiated research into appropriate medical datasets, as well as synthesis methods, to train AI models for accurate identification and response recommendations
  - **Embedded Systems Prototype Design:** Planned the hardware architecture, including sensors, rechargeable power systems, and minimalistic display components for user interaction
  - **Cost Optimization:** Evaluated hardware alternatives to balance performance and cost, including the feasibility of Raspberry Pi Zero 2 W and or Pi Pico for scalable production
- **3rd Place Winner, The Pitch Competition (\$1,000)** – Mount Allison University Secured recognition for presenting a scalable solution bridging AI and healthcare. Key accomplishments:
  - **Algorithm Design:** Highlighted the potential for Computer Vision (CV), natural language processing (NLP), and decision tree algorithms to conduct diagnosis
  - **Technical Feasibility:** Showcased a draft plan in hardware-software integration, detailing a roadmap for prototyping and development
  - **Innovative Impact:** Conveyed how the device could provide critical assistance in emergencies, ensuring accessibility and reliability

## Accomplishments

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- **Global eSports Excellence:** Top 100 Global Ranking Achievement in League of Legends (EUW) in Season 3
  - **Exceptional Global Ranking:** Achieved a prestigious top 100 position among over 70 million *active monthly* players globally, placing in the unparalleled 0.000001% of competitive players—a testament to an extraordinary level of discipline and ambition that few can attain
  - **Strategic Mastery:** Exhibited exceptional split-second decision-making and strategic acumen in high-pressure competitive environments, consistently outmaneuvering professional-level opponents through a relentless pursuit of excellence
  - **Strategic Innovation:** Pioneered adaptive gameplay strategies and meta-defining approaches, consistently pushing the boundaries of competitive play to maintain an extraordinary advantage over peers in one of the most challenging environments in eSports
  - **Competitive Success:** Dominated multiple tournaments, securing numerous 1st place victories and consistently achieving top 3 placements, underscoring sustained excellence in a field where only the most dedicated thrive
- **Directed, managed, and developed significant projects** – Led Development of Three Major Open Source Projects
  - **Market Success:** Built and maintained a community of 314,000+ active subscribers across platforms and 1.3+ million unique visitors, demonstrating strong product-market fit
  - **Quality Assurance:** Achieved 92-95% positive user ratings through rigorous quality control and continuous improvement
  - **Team Management:** Led and coordinated distributed teams of volunteers across multiple years, ensuring consistent quality projects delivery
  - **Technical Implementation:** Architected and deployed complex systems including custom gameplay mechanics, asset management, and Open Source Projects
  - **Project Scalability:** Successfully maintained and expanded three separate gaming projects simultaneously while ensuring consistent quality
- **Advanced Mathematical Conduct** – Self-Study in Pure Mathematics
  - **Theoretical Mastery:** Successfully proved over 600 mathematical propositions through rigorous logical analysis
  - **Independent Studies:** Conducted self-directed study in advanced mathematical concepts prior to university
  - **Documentation:** Maintained detailed proof documentation demonstrating thorough understanding