

AYMAN AGAMY

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EDUCATION

University of Manitoba

September 2020 - April 2025

- Bachelor of Science, Major in Computer Science
- Recipient of two scholarships for the Science Students' Association Tutoring Program
- Experience Record (Co-curricular) for peer tutoring Computer Science courses

TECHNICAL SKILLS

Programming & Development

- Frontend: React, Vue.js, TypeScript, JavaScript, HTML/CSS
- Backend: Python, Java, Rust, PHP, Grails
- Mobile: Swift (iOS), Java (Android)
- Database: PostgreSQL, MySQL, SQLite, MongoDB, Microsoft SQL Server, H2 Engine
- Testing: JUnit, Jest, Pytest, Selenium
- Format: R, LaTeX, Markdown, JSON, XML

Cloud & DevOps

- Cloud Platforms: AWS (ECS, S3, ECR, CloudFront), Google Cloud Platform (App Engine, Cloud SQL)
- Tools: Git, GitHub Actions, Azure DevOps, Jira, SonarCloud, Apache JMeter, CPanel
- Development Environments: Visual Studio, IntelliJ, WebStorm, Xcode, Android Studio

SOFT SKILLS

- Communication: Effectively conveyed complex technical concepts to non-technical stakeholders during AAFC projects
- Problem Solving: Optimized API calls in Peek Transit app by implementing caching that reduced load times by 50
- Teamwork: Collaborated with cross-functional teams at Agriculture Canada to deliver full-stack solutions on schedule
- Adaptability: Rapidly learned Rust for General Utils project despite no prior experience with the language

WORK EXPERIENCE

Agriculture & Agri-Food Canada

May 2023 - September 2023

Programmer/Analyst (Small Systems)

- Developed a full-stack digital library management web application using Grails, React, and H2 Database Engine
- Developed a multi-lingual React application with i18next integration, enabling farmers across Canada to calculate Accrual Breeding Herd Adjustment and Adjusted Reference Margin (ABHA/AARM) for the government of Canada
- Maintained production control system's schedule, logs, and database, ensuring system availability and reliability
- Created comprehensive documentation for application functionalities and user manuals

Harvest International Schools

June 2018 - October 2018

ICT Teacher

- Taught elementary students Microsoft Office applications (Word, Excel, and PowerPoint)
- Created and graded theoretical and practical assessments
- Maintained a safe, interactive learning environment

PROJECTS

Peek Transit

February 2025

- Developed a front-end SwiftUI IOS application for winnipeg transit system, enabling users to track buses in real-time with lock/home screen widgets
- Implemented rate limiting and caching to reduce API calls and improve performance
- Utilized CoreLocation and MapKit to provide accurate location tracking and bus route visualization
- Published the application on the App Store with approval from Winnipeg Transit!

Peek Tree

Janurary 2025

- Developed a command-line tool using C to visualize directory structures as ASCII trees with file previews functionality
- Implemented a custom file parser to extract file metadata and generate previews
- Utilized ANSI escape codes to render colorful and interactive trees in the terminal

File Flow

January 2025

- Developed a SwiftUI macOS application enabling users to customize default applications for different file types
- Implemented system-level integration for seamless file association management

General Utils

November 2024

- Architected and developed a full-stack utility platform using TypeScript and Rust, featuring file conversion, video downloading, and secure file sharing
- Implemented an architecture deployed on AWS, utilizing ECS for containerization, S3 for storage, and CloudFront for content delivery
- Designed and implemented RESTful APIs with PostgreSQL database integration for efficient data management

Harvest Schools Website

May 2024

- Developed a full-stack web application using React and PHP, deployed on CPanel, to serve as the school's primary digital platform
- Implemented features for accessing school information, events, and resources while showcasing facilities and achievements
- Created an intuitive content management system enabling staff to update website content independently

Epoch

April 2024

- Developed a full-stack social media platform using React and Python, enabling users to share content in scheduled time capsules
- Implemented secure user authentication using Firebase Authentication
- Deployed the application on Google Cloud Platform using App Engine and Cloud SQL for scalability

Flights Analyzer

November 2022

- Developed a terminal-based analysis tool using Java and Microsoft SQL Server to process and analyze a 50GB dataset of flight records and weather data
- Implemented complex SQL queries and data merging algorithms to correlate flight delays with extreme weather conditions
- Created visualization tools to present performance metrics and reliability statistics for major US airlines over a 10-year period

Better Than Aurora

April 2022

- Designed and developed an Android application using Java and HSQLDB as an alternative to the university's student records system
- Implemented features for course registration, grade tracking, and academic planning

VOLUNTEER EXPERIENCE

Nimbus Learning

February 2021 - Present

Science Students' Association Peer Mentor

- Help first and second year students understand concepts and assessments in different computer science courses at the University of Manitoba.
- Tutor of the year award for the 2022-2023 academic year with over 250 hours of tutoring support for 90+ students

Harvest International Schools

June 2018 - May 2024

Developer

- Developed and maintained the school's website using React, PHP, and CPanel
- Created a custom Content Management System (CMS) for the school's library
- Developed a Visual Basic .NET tuition fees calculator for administrative staff