

# Rayan Kamdem

734-882-7077 | [rayankdm@umich.edu](mailto:rayankdm@umich.edu) | [linkedin.com/in/rayan-kamdem](https://linkedin.com/in/rayan-kamdem) | [github.com/rayank906](https://github.com/rayank906)

## EDUCATION

### University of Michigan - Ann Arbor

Expected Graduation: May 2027

*B.S. in Computer Science, Minor in Mathematics*

GPA: 3.74

- **Coursework:** Data Structures and Algorithms, Computer Organization, Object Oriented Programming, Computer Science Pragmatics, Discrete Mathematics, Linear Algebra, Calculus I-III, Data Computing
- **Activities:** Atlas Digital Consulting Group, ColorStack, National Society of Black Engineers, BlackGen Capital

## EXPERIENCE

### VetData Force

May 2025 – Jul 2025

*Software Engineer Intern*

- Designed and deployed a website for joint venture using Next.js and TailwindCSS in 4-person team, enhancing brand visibility among federal and commercial clients and driving 15% increase in business traffic and outreach
- Spearheaded CI/CD pipeline integration using GitHub Actions, replacing manual deployment with automated workflows; reduced approval-to-deployment time by 83% and accelerated feature updates for stakeholders

### Atlas Digital Consulting Group

Jan 2025 – May 2025

*Software Analyst*

- Implemented full stack web application to automate e-mail outreach to recruiters by scraping emails from ApolloAI, using React.js for user interface and Firebase for backend, improving job search workflows for 350+ students
- Engineered Node.js proxy server to reduce API key exposure risks and enable calls to ApolloAI, automatically populating Firebase database with names and email addresses of 100+ recruiters
- Orchestrated integration of OpenAI and Mailgun APIs to generate and send 300+ customizable email templates

### Fronttieres Group

June 2024 – July 2024

*Software Engineer Intern*

- Developed automated reminder system for the company's external subscriptions using Python and Flask to ensure timely renewals for subscriptions, reducing manual subscription tracking time by 66%
- Architected web interface for the reminder system to display and send upcoming reminders via email and text message using Flask-Mail, HTML and CSS, achieving 80% reduction in developer support requests
- Streamlined database access by migrating 50+ raw SQL queries to SQLAlchemy, eliminating query duplication and improving code maintainability, enabling 3+ engineers to deliver features 2x faster with fewer bugs

## PROJECTS

### Crypto Price Prediction | *Python, FastAPI, Pandas, XGBoost, AWS Lambda*

- Engineered XGBoost regression model to predict Bitcoin logarithmic returns using technical indicators (RSI, MACD, Bollinger Bands), achieving a 40% improvement in  $R^2$  over baseline linear regression model on test data
- Deployed FastAPI endpoint on AWS Lambda with <300 ms latency, enabling serverless real-time requests

### Order Book Simulator | *C++, Priority Queues*

- Built price-time-priority order-matching engine using priority queues, processing 1M+ orders and executing 760K+ trades in <10 seconds (74K+ orders/s) with  $O(\log n)$  trade matching efficiency

### Distracted Driver Detection | *Python, Tensorflow, Keras, Scikit-learn, Seaborn*

- Programmed convolutional neural network to classify distracted driver images using TensorFlow and Keras
- Trained convolutional neural network model on a dataset of over 7,400 images, utilizing data augmentation and class balancing techniques to enhance performance and prevent bias, achieving an 87% accuracy

### Video Resizer | *C++, OpenCV, OpenMP*

- Implemented video resizing program that applies seam carving to remove the least important pixels from each frame of an MP4 file, preserving key visual content while reducing overall file size
- Parallelized seam carving across frames using OpenMP, effectively reducing video processing time by 98%

## SKILLS AND ADDITIONAL

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

**Developer Tools:** Git, Flask, React.js, Node.js, Pandas, NumPy, Linux, AWS

**Interests:** Basketball Lover, Avid Artist, Recreational Swimmer, Passionate Chess Player, Dog Person