

# Kai Wang

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## EDUCATION

**University of Waterloo** | Bachelor of Applied Science in Computer Engineering (Software Engineering Option)

**Relevant Courses:** *Software Design & Architecture, Distributed Systems, Computer Networks, Databases, Algorithms*

Sep 2021 - Apr 2026

## SKILLS

**Languages/Frameworks:** C#/.NET Core, Ruby on Rails, Python, SQL, Java, C/C++, JavaScript, Vue, React, HTML/CSS

**Tools/Technologies:** PostgreSQL, MySQL, MongoDB, Node, AWS, GCP, Docker, Kubernetes, Selenium, PyQt, Stripe, Git

## EXPERIENCE

**Vidyard** | Software Developer Co-op

Sep 2025 - Dec 2025

*Ruby on Rails, Vue, Node.js, MySQL, Docker, Kubernetes, Terraform, RSpec, GraphQL, Stripe*

*Kitchener, ON*

- Developed full-stack dashboard features using Ruby on Rails and Vue.js, with a MySQL database and GraphQL integration
- Implemented Stripe workflows to streamline payment processing across various subscription types and payment plans
- Launched a monthly to yearly subscription migration feature, boosting customer retention by 78% and reducing churn by 3x

**Workleap** | Software Developer Intern

Jan 2025 - Apr 2025

*Ruby on Rails, PostgreSQL, Sentry, Mixpanel, OpenTelemetry, Honeycomb, Sidekiq, RSpec, Ember.js*

*Montreal, QC*

- Delivered backend features in Ruby on Rails, creating PostgreSQL migrations, exposing APIs, and testing via RSpec
- Built a multithreaded AI content generation algorithm, improving performance and scaling to support high-volume requests
- Improved system observability by integrating OpenTelemetry tracing with Honeycomb to monitor application performance
- Enhanced product analytics for backend services by integrating Mixpanel for event tracking and Sentry for error monitoring

**Senstar Corporation** | Software Developer Associate Intern

Jan 2024 - Apr 2024

*C#/.NET, SQL Server, DevExpress, Winforms, NUnit*

*Waterloo, ON*

- Built an advanced video security system in C#/.NET with DevExpress, Winforms, and SQL Server for database management
- Implemented robust third-party integrations, utilizing modular design principles like decoupling and dependency injection
- Improved code reliability via test-driven development, writing structured unit/integration tests with NUnit

**Titanium Agency** | Software Engineer Intern

May 2023 - Aug 2023

*.NET Core, GCP, BigQuery, CloudSQL, Python, JavaScript, Blazor*

*Waterloo, ON*

- Designed a real-time data pipeline in .NET Core to extract live advertisement expense data using Google BigQuery (GCP)
- Automated ad creation/management via the Google Ads API and asynchronous Python scripts, slashing campaign setup time
- Streamlined ad performance analysis using a hybrid JavaScript/Blazor web app backed by CloudSQL

**Miovision** | Software Developer Intern

Sep 2022 - Dec 2022

*Ruby on Rails, MySQL, C#/.NET, AWS S3, Docker, Kubernetes*

*Kitchener, ON*

- Built backend features in C#/.NET Core, including internal API endpoints and comprehensive unit/integration tests
- Contributed to a robust Ruby on Rails platform for road traffic data analysis, leveraging AWS S3 for large-scale cloud storage
- Processed high-volume traffic data with optimized SQL queries to support data analysis and improve performance

**Watolink Engineering Student Design Team** | Connected Software Developer

Sep 2021 - Dec 2022

*Python, PyQt, DALL-E, Selenium, Tweepy*

*Waterloo, ON*

- Engineered a brain-computer interface using action classification through EEG signal analysis in Python with a PyQt GUI
- Integrated with the DALL-E AI model via Selenium automation and enabled BCI-driven X interaction using the Tweepy library
- Placed 1st overall in the NeuroTechX global undergraduate non-invasive neural interface student club competition

## PROJECTS

**SpyWatch** | *Python, FFmpeg, UDP, Web Sockets*

- Created a drone-based, video-only surveillance device that combines real-time video footage and AI-powered lip reading
- Programmed in Python using the Tello Drone SDK via UDP web sockets, and FFmpeg for video decoding and streaming
- Winner of the Symphonic Labs API award at Hack the North 2024 for creatively applying AI in audioless environments

**Sonus Halo** | *Python, Tensorflow Lite, Keras, C++*

- Designed a wearable wristband that translates audio into haptic feedback, improving accessibility for hearing-impaired users
- Trained and deployed a TensorFlow Lite CNN to classify real-time environmental audio input into distinct sound categories
- Implemented a Python audio preprocessing pipeline to filter, segment, and label clips for ML model training and inference