

# Maxime St-Onge Amoretti

## Infrastructure Engineer

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### EXPERIENCE

#### **Infrastructure Engineer, nDreams Orbital**

Oct 2023 – present | London

nDreams Orbital is solely focused on developing the next generation of social live service virtual reality games.

#### **Software Developer & Co-Creator, Otter**

Nov 2022 – Aug 2023 | Toronto

Otter is an open-source, cloud native framework that allows developers to easily integrate peer-to-peer video communication within their own web application.

- Engineered an auto-scaling serverless infrastructure on AWS to enable WebRTC functionality within web applications (HTTP/WebSocket API Gateways, Lambda functions, ECS with Fargate, and DynamoDB).
- Wrote a CLI tool to automate the provisioning and teardown of AWS cloud infrastructure (IaC) saving developers over 100 steps.
- Developed a React frontend application for private 1-on-1 meetings hosted by Otter (CloudFront with S3 Bucket), offering low latency audio/video communication, instant messaging, and file sharing.
- Containerized and deployed CoTURN, an open-source implementation of STUN/TURN protocols, in an ECS cluster with Fargate to support Otter's P2P connectivity.
- Built a simple API for developers to integrate Otter's functionality within their web applications.
- Secured HTTP/WebSocket API Gateways by using an API key and JSON Web Tokens.
- Optimized Otter by reducing the number of reads to DynamoDB resulting in an 80% decrease in latency.
- Authored a technical case study [📄](#) on the design decisions and engineering challenges faced while building Otter.

#### **Software Developer, Self-employed**

Apr 2022 – Nov 2022 | Toronto

Developed open-source software, some highlighted applications include:

- ReAck: An application for collecting and inspecting HTTP webhook requests. ReAck is built with React, Node.js (Express framework), PostgreSQL, MongoDB, and Nginx.
- Rate Your Dinner: An application for rating culinary experiences. Built with Pug templating engine, Node.js and PostgreSQL.

#### **Actuarial Analyst - Pricing & Reserving,**

Jan 2019 – Apr 2022 | Toronto

*KPMG Canada, Wawanesa Insurance, NBFC, RSM Canada*

Actuarial science relies on mathematics, statistics, and finance to quantify risk present in insurance products.

- Prepared the valuation for lines of businesses cumulating to more than \$1 billion.
- Collaborated closely with clients to achieve desired goals.
- Built data and financial models to support business requirements.
- Mentored junior team members during onboarding process.

### SKILLS

#### **Frontend**

JavaScript, React, WebRTC, HTML, and CSS

#### **Backend**

Node.js, Express, Go, Python, PostgreSQL, MongoDB, and RESTful APIs

#### **AWS Cloud**

Lambda, ECS, EC2, Fargate, API Gateway, CloudFront, S3, NLB, IAM, and DynamoDB

#### **Other**

TypeScript, OOP, HTTP, Docker, Nginx, Git, WebSocket, Webhooks, R, Tableau, and Alteryx

### EDUCATION

**B.Sc. - Mathematics, Université de Montréal**

2018