

# MICHAEL LOWENSTEIN – Senior Software Engineer

+1 403-667-0161 • [michael@lowenstein.ca](mailto:michael@lowenstein.ca) • [linkedin.com/in/mlo2gs](https://www.linkedin.com/in/mlo2gs)

## PROFESSIONAL SUMMARY

Versatile Senior Software Engineer with expertise in designing, developing, and delivering scalable enterprise software. Proven success in front-end and back-end engineering, releasing products for businesses of all sizes. Skilled in modernizing systems, managing technical documentation, mentoring developers, and crafting impactful, future-proof solutions that balance technical feasibility with strategic goals.

## WORK EXPERIENCE

### Senior Freelance Software Engineer 2024–Present – 1280 Labs Inc. & Independent

#### ANGULAR | REACT TS | C# .NET CORE | PYTHON | NODEJS | POSTGRESQL

- Team Lead on the frontend application for new AI-enabled Talent Management CRM Platform
- Engineered a suite of backend services using Python, Node.js, and Redis to support dynamic device discovery, user identity provisioning, and secure session management.
- Developed and maintained Flutter-based mobile client and Angular web dashboard for interfacing with real-time data and administrative controls, ensuring seamless UX across platforms for local robotics shop
- Led the integration of AI-driven features for device diagnostics and behavior analytics, leveraging machine learning models deployed via Python FastAPI and TensorFlow Lite for edge inference.
- Collaborated across product, data science, and DevOps teams to refine the cloud-native API architecture, including WebSocket-based messaging layers and RESTful service orchestration.
- Maintained automated testing suites and provided production-level observability with integrated logging, metrics, and alerting via Grafana and Prometheus.

### Senior Back-End Software Engineer – College House at House Analytics

#### C# .NET CORE | POSTGRESQL | MACHINE LEARNING | VUEJS | PYTHON | NODEJS + NESTJS

- Design and implement enterprise-scale .NET Core solutions, including CQRS Web APIs, database administration, and AWS infrastructure integration
- Led the planning, prototyping, and deployment of back-end infrastructure for analytics products, modernizing legacy systems and creating a test automation framework to enhanced efficiency and scalability
- Develop and prototype a new Message Bus architecture, exploring multiple technologies such as AWS MQ/SQS, RabbitMQ, Redis, and Kafka to optimize communication and reliability
- Prototyping new machine learning algorithms in Python, R and Flask
- Integrate machine learning features into production systems, driving the planning, presentation, testing, and successful deployment of these capabilities
- Collaborate directly with stakeholders to future-proof products, ensuring alignment with

business goals, and author detailed documentation for end-users and internal teams

### **Senior Software Engineer - NCAL Engineering**

#### **C# .NET CORE | ANGULAR | POSTGRESQL | REACT TS | VUE | PYTHON | NODEJS + NESTJS**

- Develop and document end-to-end software solutions to optimize business operations, data management, and analysis while overseeing all aspects of the software development lifecycle
- Implement ETL processes to synchronize time-tracking APIs with production databases using NestJS, NodeJS JWT Token Authentication, Python scripting for setup & teardown of short-lived servers, and Redis Cache APIs
- Design and deploy invoice automation and analytics dashboards leveraging Angular 16, React UI, and C# .NET Core Authentication APIs, supported by NodeJS microservices for caching, file storage, and database access
- Build and extend a custom data management warehouse for engineering graphics and metrics using Angular 16/17, .NET Core Authentication APIs, and supporting NodeJS microservices
- Engineer and deploy machine learning models for anomaly detection across historical and live data entries, utilizing Python and TypeScript
- Manage DevOps pipelines and deployments using Azure Containers, App Services, in-house remote VMs, and Docker Compose to ensure seamless integration and system reliability
- Designed and deployed an Invoice Automation Platform, saving the Senior Engineer and Founder a full week of hours every month, streamlining financial workflows

### **FullStack Labs 2022-2024 Senior Software Engineer**

#### **C# .NET CORE | NODEJS + NESTJS | MACHINE LEARNING | NEXTJS | REACT TS | PYTHON**

- Led the planning, design, and implementation of front-end systems for a Custom Cabinetry CRM/Project Management Application, ensuring seamless user experience and performance optimization.
- Developed and maintained the front-end architecture for an Enterprise Association Management Portal, leveraging Angular (versions 9-17), GraphQL, REST APIs, and .NET Core APIs (C# and F#).
- Built and deployed new Angular frontends and back-end authentication APIs for secure client login and account management, integrated with Python automated testing frameworks
- Co-led the design and implementation of functional components for the FullStack Labs Admin Application using React.js and Next.js while supporting DevOps tasks on Microsoft Azure
- Developed Toggl and HubSpot ETL pipelines, improving payroll auditing accuracy from 96.1% to 99.8%, ensuring compliance and financial accuracy
- Authored back-end ETL applications using TypeScript, Node.js Express, and NestJS frameworks with AWS cloud storage, streamlining automated daily database backups and enhancing infrastructure reliability
- ETLs were part of an R&D initiative, which involved a prototyping and A/B Testing phase, both of which were completed using Python and Cron for scheduling.
- Developed Python scripts and microservices for testing, data scraping, API and CRM synchronization (Toggl, Lever, HubSpot), ensuring data accuracy and consistency

## **Peloton Computer Enterprises 2017-2022 Software Engineer**

### **C# .NET CORE | VB.NET | ANGULAR | PERL | POSTGRES SQL | MSSQL | REACT TS | PYTHON**

- Developed a new web application, ProdView, for task scheduling and operations in the oil and gas sector, utilizing ASP.NET APIs, Angular 7, Cosmos DB, and Python microservices
- Created MVPs and proof-of-concept applications for client demos, integrating APIs, authentication servers, synchronization, and file storage using Node.js, TypeScript, JavaScript, and Express
- Designed and implemented Angular (versions 7-9) front-end MVPs to showcase features before full-scale planning, enhancing client feedback and refinement processes
- Maintained and enhanced the Land Management System for oil and gas clients by resolving bugs, developing features, and improving performance using Perl, Python, Rust, and JavaScript
- Managed Linux servers, optimized PostgreSQL and FreeBSD systems, and developed microservices using Node.js, TypeScript, and JavaScript to improve system reliability and efficiency

## **SIACHarts (SIA Wealth Management) 2016-2017 Software Developer**

### **C# .NET CORE | ANGULAR | JQUERY | MSSQL | PYTHON**

- Rebuilt a legacy software application using modern web technologies, including the design and implementation of a User Settings Console to streamline account management and configuration processes
- Developed a suite of financial market tools, including stock market analysis and visualization charts, as well as financial calculators, to improve data insights for users
- Utilized MSSQL Server, ASP.NET (C#), JavaScript, jQuery, Bootstrap, and Python test suites to ensure robust application performance and reliability
- Introduction to Angular framework.

## **EDUCATION**

**University of Calgary** [Calgary, AB, Canada]

BSc.KNES 2014 & BSc.CPSC 2017

## **CORE SKILLS & CERTIFICATIONS**

- |                        |                       |                               |
|------------------------|-----------------------|-------------------------------|
| ● Software Development | ● Real-time Analytics | ● Heroku                      |
| ● Project Management   | ● TypeScript          | ● Azure                       |
| ● Angular              | ● JavaScript          | ● Remote VMs                  |
| ● React                | ● HTML                | ● Docker                      |
| ● Vue                  | ● CSS                 | ● Kubernetes                  |
| ● Python               | ● SCSS                | ● Shell Scripting             |
| ● NodeJS               | ● Rust                | ● Linux System Administration |
| ● NestJS               | ● PostgreSQL          | ● DevOps                      |
| ● Express              | ● AWS                 | ● Discovery                   |
| ● C#                   | ● NoSQL               | ● Optimization                |
| ● ASP.NET              | ● Perl                |                               |
| ● .NET Core            |                       |                               |
| ● MS SQL Server        |                       |                               |