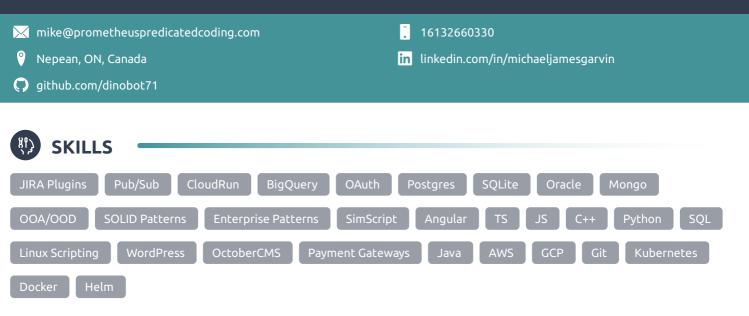# Michael Garvin

CEO Prometheus Predicated Coding Inc.

30+ Years in large scale reverse engineering, marketing technology, discrete event simulation, database design and administration, compilers, distributed computing, graphics, web applications, GUI design, UNIX/Linux administration, scrum teaming and mastering, large scale C++ application development, content management systems, Kubernetes/Docker, GCP Networking and enterprise architecture.

✉ mike@prometheuspredicatedcoding.com

📱 16132660330

📍 Nepean, ON, Canada

in linkedin.com/in/michaeljamesgarvin

○ github.com/dinobot71

🧠 SKILLS

`JIRA Plugins` `Pub/Sub` `CloudRun` `BigQuery` `OAuth` `Postgres` `SQLite` `Oracle` `Mongo`

`OOA/OOD` `SOLID Patterns` `Enterprise Patterns` `SimScript` `Angular` `TS` `JS` `C++` `Python` `SQL`

`Linux Scripting` `WordPress` `OctoberCMS` `Payment Gateways` `Java` `AWS` `GCP` `Git` `Kubernetes`

`Docker` `Helm`

💼 WORK EXPERIENCE

Rail Network 3D Panorama Inspection
IronRoad

06/2022 - 10/2022   *Ottawa, Canada*

Consulting engineering company specializing in the simulation.

Achievements/Tasks

- Reverse engineered legacy application for "walking" the rail network via 3D panoramas.
- Architected/implemented groud up multi-user Angular application with Google SSO integration.
- Optimized GCP cluster, CDN and buckets for cost savings, security and performance.
- Implemented geography based schema in PostgreSQL, leveraging PostGIS.
- Integrated with BigQuery for modular hand off of raw panorama data (millions of images)

SmartNetwork Cloud Architect
CN Transportation Services

01/2020 - 12/2022   *Edmonton, Cnaada*

Working with the rail Network Planning group as part of larger digital transformation of company

Achievements/Tasks

- Architected/implemented Pub/Sub, CloudRun based highly scalable "Pay for Play" simulation system.
- Architected/implemented routing protocol for fault tolerent parallel processing of hundreds of simulations at a time.
- Architected/implmeneted frameowrk for BigQuery data warehouse.
- Architected/implemented "data brdge" between legacy enterprise data sources and BigQuery.
- Designed, optimized and sustained simulation supporting GCP/Kubernetes infrastructure.
- Lowered costs via managed GCP infrastructure instead of on premise data center.

💼 WORK EXPERIENCE

Train Deployment Simulation
CN Transportation Services

02/2019 - 12/2019   *Edmonton, Canada*

Working with the rail Network Planning group

Achievements/Tasks

- Reverse engineered a legacy DES train deployment simulation engine based on SimScript II.5/III
- Architect and core developer on new C++ based DES simulation engine
- Architect and core developer for "one click install" WAMP stack providing GUI and engine
- Leveraged many COTS frameworks; Boost++, ThreeJS, SQLite, SOCI, Angular/TypeScript
- Implemented high scale train movement graphing with video card acceleration in web browser
- Provided key business intelligence to executive management via simulation data

Technical Team Lead
Dehumidified Air Solutions

01/2010 - 12/2022   *Ottawa, Canada*

Provides enterprise level HVAC systems

Achievements/Tasks

- Guided team through agile sustaining of marketing applications and integrations.
- Architect and core developer for WordPress SSO integration with enterprise OAuth.
- Architect and core developer for on demand sales video transcription service (AWS + Zencoder).
- Architect and core developer for WordPress plugins, providing key sales data to sales associates.
- Architect and core developer for enterprise integration of a Learning Management System.
- Architect and core developer for integration with external marketing tools (i.e. ActiveCampaign)

Point of Sale Licensed Software Distribution
Precision EFI

05/2017 - 03/2019   *Saint-Eustache, Canada*

Provider of custom tuning software for high performance engines

Achievements/Tasks

- Architect and core developer of multi-user software licensing portal/store.
- Raspberry PI "Kiosk" software that connects engines via CAN bus to the portal via internet.
- Development of common (OSI like) framework for communicating with various engines.
- Designed and implemented PostgresQL schema, with an ORM layer.
- Leveraged OctoberCMS, JavaScript and PHP to create portal website and RPI kiosk.

Enterprise Tooling
Avaya

11/2009 - 01/2019   *Kanata, Canada*

Achievements/Tasks

- Managed suite of DEV/OPs tools (such as JIRA, Bamboo, Sonar etc).
- Developed various plugins for DEV/OPs tools to integrate with enterprise.
- Architect and core developer for enterprise ALM / CMS.
- Championed scrum and agility.
- Built out AWS cloud integration.
- Architect and core Designer of monitoring / reporting and dashboard.

SDE Portfolio Evolution
Nortel Networks

01/2007 - 11/2009   *Nepean, Canada*

Achievements/Tasks

- Selected and managed corporate design tool sets
- Provided technical analysis and recommendations
- Managed technical support, patching and deployments for various vendors

WORK EXPERIENCE

Rogue Wave Technical Prime
Nortel Networks

08/2000 - 08/2008   *Nepean, Canada*

Achievements/Tasks

- Responsible for managing enterprise relationship with vendor
- Managed internal web portal for vendor resources
- Worked with vendor to managing patching and deployment

Team Lead/Developer
Nortel Networks

10/1995 - 12/1998   *Nepean, Canada*

Achievements/Tasks

- Guided team through technical challenges.
- Served as core developer and architect of backend services.
- Architect of frameworks for high speed large scale indexing and code parsing.
- Travelled to India for Pre-Sales engineering.
- Accountable for several releases of tool sets across the enterprise.
- Practised agility and 360 feedback.

Internship
Nortel Networks

05/1993 - 10/1994   *Ottawa, Canada*

Achievements/Tasks

- Worked up Motif/X11 GUIs
- Learned Berkley socket programming
- Presented at technical conferences
- Developed data models for large scale reverse engineering

ACHIEVEMENTS

Patent US 06886161 (04/2005 - 04/2005)
A method for compressing source code cross reference information as a sparse bitmap.

CERTIFICATES

Professional Scrum Master 1 (09/2018 - 09/2018)
Certified by Scrum.org

EDUCATION

Master of Applied Science, Computer Engineering
Carleton University

09/1996 - 09/2002

Bachelor of Systems & Computer Engineering, Computer Engineering
Carleton University

09/1990 - 09/1995

Research Assistant, Computer Engineering
Carleton University

09/1992 - 09/1993

VOLUNTEER EXPERIENCE

Club President
Ottawa Inline Skating Club

09/2008 - 09/2009   *Ottawa, Canaad*

Tasks/Achievements
- Worked with club board of directors to organize club activities and operations. At the time, Canada's largest inline club!

Webmaster
Ottawa Inline Skating Club

09/2006 - 09/2007   *Ottawa, Canada*

Tasks/Achievements
- Club webmaster, sustained and improved club website.

ORGANIZATIONS

Royal Canadian Army Cadets (RCAC)
 (01/1984 - 01/1989)
As a member of the RCAC I developed a strong sense of drive and discipline.

SOFT SKILLS

Active Listening   Written Communication   360 Feedback