Michael BRYAN

PERSONAL INFORMATION

EMAIL:	consulting@michaelfbryan.com
WEB:	http://adventures.michaelfbryan.com/
GITHUB:	https://github.com/Michael-F-Bryan/
GITLAB:	https://gitlab.com/Michael-F-Bryan/

MISSION STATEMENT

To leverage my experience in the open-source community and working professionally to make cool things.

WORK HISTORY

FEBRUARY 2021 - AUGUST 2022

Software Engineer at Hammer of the Gods

Lead engineer working on HOTG's core containerization technology.

- Created Rune, a WebAssembly-based declarative containerization technology for machine learning on the edge
- Implemented a compiler for Rune, plus runtimes for the browser, mobile, and desktop
- Created a Rust framework for custom processing blocks that can be used with Rune
- Assisted customers with integrating Rune into their apps
- Assisted the frontend for *Forge Studio*, a graphical IDE for defining and building Runes in the browser
- Implemented the backend for *Weld Studio*, a Tauri desktop app enabling data analysts to graphically define and execute data processing pipelines locally

DECEMBER 2020 - JUNE 2021

Freelance Software Engineer

Provided software consulting services to various small businesses in Perth.

MARCH 2017 - NOVEMBER 2020

Software Engineer at Wintech Engineering

Responsible for the *Wintech Profiler* project, Wintech's domain-specific CAD/CAM package for controlling CNC foam cutting machines.

- Implemented the 9th version of the package by rewriting from the ground up in C# and WPF
- Contributed 150kloc to the project (120kloc of C#), approx. 2000+ tests, 620 merged feature branches
- Managed the product's release to customers, including factory visits and training material
- Introduced modern software practices like revision control (git and GitLab), Continuous Integration, and release automation
- Regularly provided technical support to customers in matters related to software and the motion control system

NOVEMBER 2016 – FEBRUARY 2017

Internship at Wintech Engineering

- Created an interface to a 3rd party autonesting program for optimally positioning parts to minimise waste
- Implemented pathfinding to optimally link multiple nested parts into a contiguous cut path
- Upgraded the Profiler 8 GUI to incorporate modern components like Ribbons and high resolution icons

Open-Source Projects

Rust User Forums	Core member of the Rust community, answering technical questions and teaching new Rustaceans about the language. Received over 4700 likes and solved over 250 threads. (https://users.rust-lang.org/u/michael-f-bryan/summary)
Website	An online platform I use for writing about deeply technical topics in the field of Software Engineering like WebAssembly, application architecture, interoperability between programming languages, and computational geometry (http://adventures.michaelfbryan.com/)
gcode-rs	A g-code parser for use in memory-constrained environments. Primarily used by hobbyists implementing their own 3D printers. (https://github.com/Michael-F-Bryan/gcode-rs)

Programming Languages and Technologies

ADEPT *(drop me in a new project and I'll be productive immediately)*	RUST, WEBASSEMBLY, TYPESCRIPT, C#, GO, WINDOWS GUI PROGRAMMING (WPF), PYTHON LINUX *(Arch Linux user for 4 years)*
CONFIDENT	C++, EMBEDDED C, WEB UIS USING JAVASCRIPT AND VUE.JS OR REACT.JS, SQL DATABASES (POSTGRES, SQLITE), DOCKER AND MICRO SERVICES, DELPHI PASCAL

Education

2013 - 2018	**Bachelor of Mechanical Engineering** Curtin University
2012	**Australian Tertiary Admission Rank - 99.90** Scotch College

Additional Details

- Team leader in the *Communication Support Unit*, a *State Emergency Service* unit which provides large incidents with radio communications and mapping services. Member since November 2018.

- Member of the *Curtin Motorsport Team* from 2014 to 2018. Held the *Assistant Project Manager* role during 2015 and was involved in the various software projects as part of the Electrical Team

References

Kartik Thakore

RELATIONSHIP	CTO and direct supervisor at Hammer of the Gods.
EMAIL ADDRESS	*kartik@thakore.ai*

Bradley Eccles

RELATIONSHIP	Lead Service Engineer at Wintech Engineering. Acts as a bridge between the developers and end users, providing assistance in project direction and user experience
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