rjtunney@uwaterloo.ca
613-261-4587

Ronan Tunney

https://ronantunney.ca

4 years of experience writing, validating and deploying business solutions and applications.

SKILLS & EXPERIENCE

Programming Languages	C#, SQL, R, Python, C/C++, JavaScript, Visual Basic, Bash
Frameworks	.NET, React, XML, JSON, REST, WPF, HTML/CSS
Tools	Git, Docker, Azure DevOps, AWS, Jira, Jenkins, Visual Studio
Competencies	Statistics, Numerical Modelling, Electronics, Mechanical Design

EXPERIENCE

Abbott Point of Care — Dec 2021 - Apr 2024
Intermediate Data Engineer — *Ottawa, ON*

- Delivered a 10X improvement in the time taken to update database wafer-map files by independently performing the development, validation and deployment of a new .NET Application.
- Integrated C/C++ wafer inspection software with a thin-film measurement machine and spectrometer.
- Significantly improved the latency and UX of internal .NET Applications by refactoring the common library with bug fixes, performance improvements and WPF control reimplementations.
- Streamlined and reduced the time taken to deploy, install and update applications by architecting a new solution which allowed users to install multiple environment versions on their local machines.

Abbott Point of Care — Sep 2020 - Dec 2021
Associate Engineer — *Ottawa, ON*

- Met stringent deadlines leading the development, validation and deployment of three R packages which formed the backbone of a generalized ETL pipeline. Earned promotion for strong performance.
- Generated thousands of finished goods and qualification reports for various blood testing cartridges using R and Microsoft SQL Server to develop a dynamic data processing and statistical analysis backend.
- Eliminated engineering time taken for the calibration of cardiac marker blood testing products by writing a multidimensional optimization algorithm in C++ which consistently delivered optimal results.

Ontario Die International — Apr 2019 – Aug 2019
Robotics Developer (Internship) — *Kitchener, ON*

- Enhanced the project team's debugging and data retention capabilities by proposing and then building a system to record and playback robot perception, sensor data and camera footage.
- Established novel machine learning data by writing a C++ process to aggregate steel forming data.
- Improved the onboarding process by developing and documenting a bash alias repository.
- Designed real world test cases which exposed flaws in new manufacturing software features.

Avidbots Corp. — Aug 2018 – Dec 2018
Software Developer (Internship) — *Kitchener, ON*

- Enhanced the reliability of company robots by writing a Python back-up system which would recover customer setting files in the event of a failed startup.
- Built a CI/CD pipeline which detected regressions in the company's cleaning plan tools using Jenkins, Docker and Bash scripts.
- Halved the size of robot Docker images by writing a smart dependency handler to separately install compilation and runtime packages.

EDUCATION

University of Waterloo   *September 2015 - April 2020*
B.S. in Mechanical Engineering & Options in Management and Mechatronics
With Distinction | Dean's Honours List | U Sports Academic All-Canadian

ADDITIONAL PROJECTS

- **Tooner.io** ⬀ Multipage React app providing guitar players with the tools to learn songs fast.
- **Interactive Travel Map** ⬀ React app displaying geotagged photos on an interactive map and gallery.
- **Physics Engine** ⬀ Programmed a rigid body physics engine with no external dependencies in JavaScript.
- **C++ Fluid Simulations** ⬀ Simulated dynamic fluid behavior in C++ and OpenGL.
- **Robot Simulations** ⬀ Set up a virtual robot simulation environement using Gazebo and ROS.