Anthony Weston

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Skills

Languages: C++, C, Java, Python, Rust, C#, SQL, HTML, CSS
Technologies: Git, NFC, MongoDB, DOM, Web IDL, CMake, MQTT

Work Experience

Nymi – Software Developer Jan 2018 – Apr 2018

- Led development of critical reliability Windows system service used for login using C++
- Designed and implemented core components of service oriented architecture including fault-tolerant, multi-threaded adapter for asynchronous Bluetooth communication service
- Developed REST Client with token-based authentication for secure communication with enterprise server

Nymi – Software Developer May 2017 – Aug 2017

- Spearheaded development of NFC reading service using Windows Security and Identity API, reducing identification time for login by 80%
- Developed robust protocols for recovery from failed NFC or Bluetooth communication, improving overall rate of successful login by 27%

Open Source Contributions

Mozilla Firefox Servo Browser Engine Mar 2018 - Present

- Implemented high-value feature to accurately measure the memory usage of the JavaScript Document Object Model (DOM) for each webpage loaded by the browser engine
- Updated Servo memory profiling script to use new Rust to C++ Foreign Function Interface, improving accuracy of memory reporting for DOM objects by 33%
- Currently implementing Rust compiler plugin to verify that the inheritance of interfaces in the DOM tree match their corresponding Web IDL files

Research

University of Waterloo – Undergraduate Research Assistant May 2018 – Present

- Designing synchronization primitives for next generation Intel 3D XPoint Non-Volatile RAM, based on previous work conducted by Microsoft Research Group
- Implementing double-word fetch-and-store operation capable of performance of 2 million operations/second on memory shared between tens of threads

Projects

DoppelGallery – Hack the North 2017 Winner

- Created a reverse image search web application using Python, SQL, CockroachDB and OpenFace API

Spotify User Data Graph

- Implemented hierarchical clustering algorithm to find optimal song groupings using Rust and MongoDB
- Created scalable graph structure with hybrid indexing, based on techniques used by neo4j