



Eric Buss

Website: ejrbuss.net

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Education

Bachelor of Software Engineering

Sep 2014 – Graduating Aug 2019

University of Victoria

Victoria, BC

Skills

Programming Languages: C, C++ (11, 17), Objective-C, Python (2.7, 3), Rust, Java, Clojure, SQL, PHP, JavaScript, TypeScript, CoffeeScript, MATLAB, R, Lua, HTML, Pug (Jade), CSS, SASS, Less, ARM Assembly

Libraries/Frameworks: Matplotlib, Numpy, SciPy, TensorFlow, React, Express, jQuery, Boost, AVR Libc, OpenGL, WebGL, CodeIgniter, Mocha, Jest, Chevrotain, Selenium, JUnit

Databases: SQL (MySQL, Oracle-SQL), MongoDB, Redis

Science Background: Physics, Astronomy, Chemistry, Earth and Ocean Science

Mathematics Background: Linear Algebra, Calculus, Statistics, Discrete Mathematics

Abstract Skills: Language Design, Parsing, Object-Oriented Design, Functional Programming, Document Weaving, Algorithms, Machine Learning, 3D Graphics, UX Design, Database Design, Requirements Engineering

Soft Skills: Leadership, Tutoring, Communication, Teamwork, Agile, Analysis, Problem Solving

Tools: Windows Office Suite, Photoshop, Pixelmator Pro, IDEs (Visual Studio, NetBeans, MySQL Workbench etc.), Jira, Jenkins, Git, GitHub, LaTeX, Emacs

Open Source Projects

JavaScript

- Library for checking duck types and other predicates in JavaScript
- Multiple competitive snake AIs written in JavaScript as part of BattleSnake competition
- Team based problem solving at a Microsoft Coding Competition
- Visual Studio Code extension for syntax highlighting of my own programming language
- Datamining library for decision trees and Bayesian analysis

3D Programming

- CPU based ray tracer with support for Phong and scatter shading
- Rust reimplement of ray tracer with parallelism
- Procedurally generated planets using OpenGL and simplex noise on the GPU
- OpenGL Animations

C Programming

- Simple Lisp with mark and sweep garbage collection
- RTOS with a live trace visualization tool for AVR microprocessors
- Python based build tool for small C programs
- Barebones webserver built with the C socket API
- A reliable datagram protocol built on top of UDP

Web App Programming

- Personal website using React and Nextjs
- SQL schema viewer and backwards engineering tool, supports static analysis of Java code
- Dungeons & Dragons game management tool
- Web application version of the board game Go

Work

Mobile Application Co-op

Jan 2018 – Aug 2018

Ericsson, Kanata Site

Ottawa, MB

Responsibilities

- Developed and maintained an app for the iPad and worked to improve maintainability of legacy software
- Developed requirements for features on a large internationally distributed team
- Assisted and managed other developers in learning web technologies
- Developed a web app prototype using TypeScript, React, and .NET

Software Developer

Sep 2016 – Feb 2017

Engineering Dean's Office, University of Alberta

Edmonton, AB

Responsibilities

- Designed a database schema for room booking software
- Worked on redesigning a database schema for graduate student's financial records
- Developed and maintained software for the Engineering intranet with regards to graduate student's financial records
- Developed software for Engineering intranet back end maintainability and functionality
- Provided software support for Professors and Administrators in the Dean's office

Research Assistant

Jan 2016 – May 2016

Department of Mechanical Engineering, University of Alberta

Edmonton, AB

Responsibilities

- Developed productivity software for a Professor of Mechanical Engineering
- Developed software to help promote open source research
- Developed software for the Mechanical Engineering Intranet with regards to Engineering Accreditation

Interests

I love movies, science fiction, and anything science or philosophy related! I fancy myself an amateur writer and enjoy creative endeavors, including drawing, playing instruments, and storytelling. I may not be great at all of these activities, but they have created fantastic memories. In my leisure time I love to sit down with friends for tabletop, go hiking, or hit the climbing wall.

References

Contact Information Available Upon Request

- Bob Koch
Former Employer – Professor of Mechanical Engineering at the University of Alberta
- Mehran Panahi
Former Employer – Senior Software Engineer at Infoblox
- Gino Lord
Former Employer – Software Designer for Wifi Mobility solutions at Ericsson