

□+1 (226) 792-4763 | Shanerhickman@gmail.com | Asrhickma.dev | Instruction of the structure of the structur

Skills

Languages Strong Java, Rust, Go, Kotlin, C, C++, C#, SQL

Medium Ruby, Python, Scala, PHP, JavaScript, HTML, CSS, PBasic, Assembly, MATLAB

Limited NodeJS,VHDL, BASH

Server/Cloud REST, AWS, Heroku, NGINX, SocketIO, Spring, UNIX

Database yugabyteDB, MongoDB, PostgreSQL, MySQL, Elasticsearch, Redis, Hibernate, JPA, Diesel, gh-ost

Security Cryptographic algorithms, security principles, JWT, TLS, OpenSSH, OpenSSL

Deployment Puppet, Ansible, Terraform, Docker, Kubernetes

Build/CI Gradle, Maven, [C]Make, Jenkins, TravisCI, various code coverage tools

MonitoringDatadog, Prometheus, LogDNA, Sentry, Splunk, Signal FxApp DevelopmentUnity3D, Photon, UWP, Andrioid Studio, JavaFX, Swing

Editors Spacemacs, Visual Studio [Code], anything by JetBrains

Experience

Stripe Software Engineer · Go, Ruby, Puppet, Ansible, Terraform

Seattle WA, USA May 2021 - present

• Building infrastructure for Stripe's PCI-compliant cardholder data environment, with a focus on improving system security, reliability, and developer productivity.

• Product security lead of three infrastructure teams.

Tier 9 Game Studios 🗹

Waterloo ON. Canada

SOFTWARE ENGINEER · JAVA, C#, UNITY

May - Aug 2020

- Architected a framework for efficiently fetching, caching, and rendering unbounded tile-based maps in Unity.
- Built foundational libraries to provide database entity management, asynchronous REST and Websocket requests, and multi-server synchronization.
- Implemented real-time multiplayer game mechanics using Websockets.
- Introduced asynchronous programming, dependency injection, and other industry-standard methodologies.
- Contributed many quality-of-life improvements to deployment and migration procedures.

Stripe 🗹 Seattle WA. USA

SOFTWARE ENGINEER INTERN · SCALA, RUBY, REACT

Jan - April 2020

- Member of Revenue Products team, working primarily on the Billing Analytics event pipeline.
- Wrote large scale Apache Spark jobs in Scala to aggregate events, rank products, and produce time-series aggregations of historical data
- Designed and implemented new Billing Analytics charts using React and Ruby.
- Refactored event processing pipeline to make event aggregation jobs idempotent, resulting in more consistent (and easier to test) behaviour.
- Wrote a suite of Apache Spark queries to identify and fix inconsistencies in user facing data.

YugaByte 🗹 Sunnyvale CA, USA

SOFTWARE ENGINEER INTERN · C, C++, JAVA

May - Aug 2019

- · Member of Query Layer team, working to integrate Postgres fronted with distributed document store backend.
- Wrote robust and portable shared memory library to improve system catalog cache consistency across nodes.
- · Added support for Postgres role-based access control, ensuring consistency in a distributed environment.
- Designed and implemented a gflag-based configuration mechanism to make Postgres configurable through YugaByte.
- Added support for various ALTER TABLE variants in Postgres.
- Refactored post-test cleanup process to reduce flakiness and increase test speed.
- Contributor on multiple open-source projects at YugaByte, including yugabyte-db ...

Faire 📝 Kitchener ON, Canada

SOFTWARE ENGINEER INTERN · JAVA, KOTLIN

- Architected an inter-server event framework using Amazon Kinesis and Protocol Buffers.
- · Designed and implemented APIs to support offline ordering, retailer-to-maker referrals, and out-of-stock products, contributing to user acquisition and an overall increase in sales.
- · Implemented several complex email cadences to promote and notify users of new features, with visualized A/B tests for subject lines
- · Added web-hooks to push logged errors into Redshift, supporting more complex error analysis.
- Mentored and on-boarded new backend developers as the team nearly doubled in size.
- Integrated code coverage tracking into TravisCI to motivate better testing practices.

SOFTWARE DEVELOPER INTERN · Go, C#

New York NY, USA Jan - April 2018

Sept - Dec 2018

- Proposed and implemented a scalable and load-balanced backend architecture for user-management, real-time messaging, and data synchronization on AWS, written in Go.
- Introduced stateless authentication and role-based authorization mechanism using JSON Web Tokens.
- Developed platform agnostic .NET web socket and http implementations for multi-threaded API clients.
- Wrote memory efficient Google Poly wrapper to rank and page results based on keywords.
- · Added DevOps functionality through metrics gathering (Prometheus + Grafana), and deployment scripts (Ansible) for all servers.

Miovision 2 Kitchener ON, Canada

SOFTWARE DEVELOPER INTERN · JAVA

May - Aug 2017

- · Designed and implemented a performant API to export large amounts of data from Hibernate + MySQL to AWS.
- Refactored data extraction workflow to parallelize tasks, increase accuracy, and pave the way for future cost savings initiatives.
- Deployed metrics agents to monitor download speeds and cache performance of satellite servers.
- Wrote and maintained POJOs to facilitate ison data transfer to and from computer vision software.
- · Worked closely with computer vision team to determine specifications and integration details of new software and the data export

Projects

Spatial 🗹

comparisum.com

Rust, Python, Docker, Ansible

PRODUCT COMPARISON WEBSITE

May 2020 - present

- Primary infrastructure and developer productivity engineer for the team.
- Developed a fast and versioned GraphQL API in Rust to power the public website.
- Designed an implemented a distributed web scraper and indexer using Scrapy, Redis, and Elasticsearch.
- Created a text search API using Elasticsearch and MongoDB.

dead-drop 🗹

SECURE NONCE FILE TRANSFERS IN THE CLOUD

May 2019 - present

- Created tool for securely transferring files via an untrusted middle-man server.
- Utilized AES-CTR with HMAC to encrypt and authenticate user data on the client side.
- Implemented client-server authentication using asymmetric key cryptography and JSON Web Tokens.

padd 🗹 Rust

FAST AND AUTOMATIC FORMATTER OF CONTEXT-FREE LANGUAGES

March 2018 - present

- Wrote library to efficiently format text using a CFG and a set of patterns.
- Implemented multi-threaded cli wrapper to batch-format projects using diff tracking.
- Created a specification language for generating lexers and parsers at runtime.

to be discovered 🗹 *C#*

2D PROCEDURAL SIDE-SCROLLER USING UNITY GAME ENGINE

2017

Wrote scalable node-based pathfinding algorithm capable of supporting hundreds of concurrent agents.

Created performant data structures as a powerful base for bounded random generation.

lens 🗹

TEXT-BASED PROCESS MANAGER FOR BOOSTING PRODUCTIVITY

2017

Modified and embedded open source JetBrains terminal emulator JediTerm into the core application.

• Created a command framework for executing various local processes through a terminal prompt.

OCTOBER 2, 2021 SHANE HICKMAN · CURRICULUM VITAE photesto.space

PHP, Java, MySQL DATABASE FOR SHARING STUDY RESOURCES 2015-2016

- Created login system with encryption and email verification to protect user data.
- Styled website responsively for optimal performance on both desktop and mobile devices.

Education

Bachelor of Software Engineering (Honours) · 95.14 Cumulative GPA

Waterloo ON, Canada

Sept 2016 - April 2021

- **UNIVERSITY OF WATERLOO**
- With Distinction & Dean's Honours List
- Relevant courses: Programming for Performance, Operating Systems, Computer Security and Privacy, Applied Cryptography, Software Design and Architectures, Introduction to Artificial Intelligence.

Ontario Secondary School Graduation Diploma · 98.5 Cumulative GPA

Fonthill ON, Canada

E.L. CROSSLEY SECONDARY SCHOOL

Sept 2012 - June 2016

Honors & Awards

2021	Stanford Fleming Foundation Co-op Proficiency Award, University of Waterloo	Waterloo ON, Canada
4B	Dean's Honours List, University of Waterloo	Waterloo ON, Canada
4A	Term Distinction, University of Waterloo	Waterloo ON, Canada
1A - 3B	Dean's Honours List, University of Waterloo	Waterloo ON, Canada
2021	President's International Experience Award, University of Waterloo	Waterloo ON, Canada
2019	President's International Experience Award, University of Waterloo	Waterloo ON, Canada
2017	President's Scholarship of Distinction, University of Waterloo	Waterloo ON, Canada
2016	Nominee, Schulich Leader Scholarship	Canada
2016	3rd Place , Regional ECOO Programming Competition	Niagara ON, Canada
2015	2nd Place , Regional ECOO Programming Competition	Niagara ON, Canada
2014	2nd Place , Regional ECOO Programming Competition	Niagara ON, Canada
2012	Gold Medal, Canada-Wide Science Fair	Charlottetown PEI, Canada
2012	Junior Innovation Award, Canada-Wide Science Fair	Charlottetown PEI, Canada
2012	Western University Scholarship, Canada-Wide Science Fair	Charlottetown PEI, Canada
2012	Gold Medal, Niagara Regional Science and Engineering Fair	Niagara ON, Canada
2011	Gold Medal, Niagara Regional Science and Engineering Fair	Niagara ON, Canada

Volunteering

Camp Volunteer

Tutor Fonthill ON, Canada

E.L. Crossley Secondary School Guidance Department

• Tutored grade 9, 10, 11, and 12 students in math, science, and computer science courses.

YOUTH UNIVERSITY & NIAGARA REGIONAL SCIENCE AND ENGINEERING OUTREACH CAMPS

• Collaborated with camp directors in presenting programs.

• Mentored and encouraged camp participants.

St. Catharines ON, Canada

July 2012 and 2013

Fall 2014 - June 2016