

Kirk Hietpas

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EDUCATION

University of Utah – *Master of Software Development*

August 2020 - December 2021, Salt Lake City, UT

University of Minnesota – *Bachelor of Science, Major: Biology, Minor: Chemistry*

August 2013 - December 2015, Duluth, MN

SKILLS

Swift / C++ / Java / Python / C# / Git / C / Docker / .NET / JavaScript / HTML / CSS / SQL (MySQL) / Dlang / Matplotlib / Pandas / PyTorch / Golang / Kubernetes / Kotlin / Android / Enyo / Apollo / GraphQL / PostgreSQL / Vapor

COURSEWORK

Database Systems and Applications, Data Analytics and Visualization, Data Structures and Algorithms, Systems I (Computer Architecture and Operating Systems), Systems II (Computer Network and Security), Software Engineering, Application System Design

EXPERIENCE

PassiveLogic, Salt Lake City, UT – *Software Engineer - Cloud Team*

January 2023 - Present

- Develop and maintain server-side applications using Swift and Vapor.
- Design and implement GraphQL APIs for seamless data querying and manipulation.
- Manage PostgreSQL database, including schema design, query optimization and data migrations.
- Collaborate with frontend developers to integrate backend services with user-facing applications.
- Deploy and monitor cloud-based applications on Google Cloud Platform.
- Utilize Docker and Kubernetes for containerization and orchestration of services.
- Ensure code quality through rigorous testing and code reviews, adhering to TDD principles.
- Integrate third-party services with existing systems to enhance functionality and streamline operations.

PassiveLogic, Salt Lake City, UT – *Junior JavaScript Engineer - User Software Team*

January 2022 - January 2023

- Developed and maintained front-end applications to create digital twins for autonomous systems using EnyoJS, JavaScript, TypeScript and CSS.
- Built user interface to ensure ease of use and functional feel for the end user.
- Interpreted client side data model to accurately represent complex systems and their associated physics.
- Collaborated across teams to implement features to enhance user experience.

Navitaire, Salt Lake City, UT – *Software Engineer Intern*

August 2021 - January 2022

- Worked with open source software to automate container deployment and orchestration.
- Built in-house tools to view and manage cloud resources.

University of Utah, Salt Lake City, UT – *Flow Cytometry Laboratory Technologist*

August 2018 - April 2021

- Assisted researchers in Flow Cytometry Sorting and Data acquisition.
- Maintained and followed troubleshooting procedures for Flow Cytometers.
- Followed experiment protocols to process samples for sorting and analysis.

Essentia Health, Duluth, MN – *Certified Pharmacy Technician*

April 2016 - August 2018

- Worked with a team responsible for processing and delivering prescription medication to outpatients while providing excellent customer service.

NOTABLE PROJECTS

Caching DNS Resolver (*Java*)

- DNS Resolver that listens for incoming DNS requests. Returns IP address to client from either the local cache or from Google's public DNS server. Caches Google's response for future use.

Transport Layer Security Protocol (*Java*)

- Simplified version of the TLS protocol used in implementation of a file transfer system.

Learning Management System (*C#*)

- Partner project using LINQ queries to pull data from a remote database and populate a UI to display course info for Students, Professors and Administrators. Implementation used the MVC pattern.

Android Lifestyle App (*Kotlin*)

- Group project building a lifestyle application to track user fitness and health goals. Focused on application system design principles and patterns.

MSDScriptInterpreter (*C++*)

- Interpreter for mathematical expressions. Focused on optimization techniques and practical software engineering concepts.

UNDERGRADUATE RESEARCH

Research Assistant – *Laboratory of Dr. Huai Deng (UMD)*

December 2016 - June 2017

- Maintained stocks of *Drosophila* and assisted in maintaining a laboratory aimed at studying oxidative response signaling using a combination of imaging, genetic and molecular approaches.

Undergraduate Research Assistant – *Laboratory of Dr. Julie Etterson (UMD)*

June 2015 - December 2015

- Assisted graduate student collecting data for a project studying the adaptability of white pines (*Pinus strobus*) in disturbed forest areas.
- Studied earthworm densities and effects on fauna composition in intact vs. disturbed forest areas.

Undergraduate Research Assistant – *Laboratory of Dr. Jennifer O. Liang (UMD)*

June 2014 - December 2015

- Maintained facility and cared for Zebrafish (*Danio rerio*) used in research aimed at understanding mechanisms that control the development of the vertebrate nervous system.
- Conducted research project studying the development of left and right brain asymmetry in Zebrafish.