

SPENCER BIRCH

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Summary of Qualifications

I have 6 years of combined academic and professional experience as a software engineer. During this time, I have tackled advanced software concepts in software security, machine learning, full-stack development, and data science. I am proficient in programming quality software, maintaining comprehensive documentation, performing tests, and resolving software defects. My full stack software experience followed Agile development practices to work effectively as a team.

Experience

AmericaHealth

Rexburg, ID

Full Stack Software Developer

May 2022 – Apr 2024

Software Security

- Outlined plans for encryption-at-rest and encryption-in-transit using AES 256 and TLS encryption algorithms.
- Developed secure access controls on server and client software levels.
- Developed sanitization of user inputs to prevent malicious attacks such as database injections, cross-site scripting attacks, and command injections.
- Researched and engineered plans for logging and auditing website user activity for EHR software.
- Followed programming standards that are HIPAA compliant to facilitate EHR software certification.

Full-Stack Development

- Used Angular, PHP, and SQL to program various pages on an existing EHR software called OpenEMR.
- Fetched data from databases using SQL and used PHP as a backend server language to calculate analytics and analysis of patient loads and healthcare services.
- Developed software and engineered plans for new EHR software using the MEAN stack.
- Followed through on coding projects from planning, developing, testing, fixing bugs, and documenting.
- Increased my skills with Github, VScode, Docker, RESTful APIs, GraphQL, npm, and linux commands.
- Integrated a national interoperability standard called X12 Electronic Data Interchange to help automate billing in the EHR software.

Developer Team Skills

- Developed documentation for more than 35 software projects.
- Mentored 2 interns and collaborated on co-projects to give them experience.
- Messaged customers when requirements were not clear enough for software projects.

Skills

Languages: C/C++, Python, Angular, JavaScript, PHP, Node.js, Clojure, Assembly, Java, Verilog, Matlab

Scripting Languages: UNIX/Linux, Git Bash

Frameworks: Angular, Jasmine

Databases: MongoDB, MySQL, MariaDB

Cloud Services: AWS (EC2, S3, RDS)

Tools & Technologies: VScode, Docker, Jira

Version Control Systems: Github

Education

BRIGHAM YOUNG UNIVERSITY - IDAHO

Rexburg, ID

Bachelor of Computer Science

August 2018 - December 2023

Minor of Electrical Engineering

GPA 3.92

Classes

- Artificial Intelligence Fundamentals Certificate (15 credits)
- Full Stack Web Development (7 credits)
- C, C++, C# (9 credits)
- Python (20 credits)
- Data science (7 credits)
- Concurrency (3 credits)
- Cybersecurity (3 credits)
- Verilog, Circuit Analysis, and hardware soldering (14 credits)