

# Albert "AJ" Snow

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## Technical Experience

**Languages:** Clojure, JavaScript, PHP, Java, C#, Rust, Python, C++

**Tools/Frameworks/Libraries:** Node.js, Express, MySQL, MongoDB, Docker, GCP, React, Kubernetes, Spring Boot, JUnit, H2

**Skills:** Software Architecture, Database Design, API Design, Project Modeling, Algorithm Analysis, MVC, Functional-Programming, Microservices, ETL, OOP, TDD

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## Work Experience

### Backend Engineer

2022 - 2023

*Peerspace*

- Operated in several Clojure and JS (Node.js + Express) micro-services which utilized MongoDB storage and GCP hosting
- Enhanced features and facilitated communication between services via two primary communication protocols
  - \* Direct calls were handled through restful APIs
  - \* Async calls leveraged Google's Pub/Sub architecture; typically to persist data in time-insensitive case
- Interfaced regularly with Kubernetes and Docker systems to deploy software images for testing and software releases
- Collaborated with teammates to create design documents for new and legacy features
- Enhanced and standardized development environments by various initiatives
  - \* Updated or added outdated documentation across various services
  - \* Added dev configs to streamline and improve feedback/REPL loops
  - \* Added testing frameworks (e.g. Jest, clojure.test) and core tests to untested repos
  - \* Standardized deployment methodologies for versioning
- Optimized, refined, and standardized MongoDB schemas to accommodate new feature development
- Debugged complex issues involving multiple over-the-wire processes across the system (e.g. when inconsistent data fired faulty events)

### Software Engineer II

2019 - 2022

*Paycom*

- Perform full stack (JS/PHP) operations, including creating a backend API and writing user-facing scripts
  - Utilized MVC style framework, OOP style design, and software was regulated (ISO 9001:2015, SOX, PII)
  - Lead initiative to design a new core feature on our team that added ability to customize *all* fields on company position; widely adopted by clients after release
  - Expand various module features by adding data customization, new workflows, and new api routes
  - Push performance improvements such as code optimization, query aggregation, and ORM optimization (e.g. 100x speeds)
  - Create DB designs based on feature requests and employ various data modeling and software design techniques
  - Redesign the code structure in various parts of my code domain (e.g. refactoring code from 1k lines to 200)
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## Education

**Kansas State University (2019)**

*Bachelor of Science in Computer Science (3.8 GPA)*

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## Projects

<b>Personal Website</b> (CLJS, Fulcro)	<i>A personal website using ClojureScript and the Fulcro framework for personal use</i>
<b>Spring Boot State Machine</b> (Java)	<i>Exploratory project to grok the Spring Boot framework. Uses H2 and REST API.</i>
<b>Utility Functions</b>	<i>Repo for experimental code concepts meant to be transferable between languages</i>
<b>Order State Machine</b> (C++)	<i>Example CLI state machine to experiment with core ETL concepts in C++</i>
<b>Hotshot</b> (CLJS)	<i>Basic API to solve a fun math case; utilized Calva for Interactive Programming.</i>
<b>Game Jam Unity Project</b> (C#)	<i>Small game built by me in a weekend featuring lightbulb-themed puzzle platforming</i>
<b>Thermal Modeling</b> (Python)	<i>College concurrency project; helped Graduated student parallelize modeling code</i>

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Open source contributions made to Fulcro's Template here: [github.com/fulcrologic/fulcro-template](https://github.com/fulcrologic/fulcro-template). I added the ability to compile and deploy a prod ready uberjar for a project when it's ready to be released.