James Clover
Full Stack Dev; Technical & Project Lead; Mentor & Trainer

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OVERVIEW

Looking to work with great people and solve important problems with software and systems. Looking for FTE or consulting roles local to Los Angeles or remote.

SUMMARY

Full-stack principal software engineer, technical lead, engineering manager, and mentor/trainer experienced in all aspects of software development. Able to take on many roles: architect, technical trainer, project manager, mentor, product manager. Effective at communicating across all levels of the organization - executives, customers, management, and development teams.

EXPERIENCE

Twisty Little Studios - Founder and Principal Engineer

October 2024 - Present; Los Angeles, CA

Software engineering studio, building products in the tabletop gaming space. Our initial product is Tale Workshop (taleworkshop.com), currently in open beta. I am the principal engineer, writing practically all of the code (currently at 100k LOC), setting up hosting within AWS (Amazon Web Services), and testing the system both internally and with public customers.

Tale Workshop is a web application that enables people to write tabletop role-playing games and run them online with a set of players. It includes authoring tools, media management, the ability to construct 2D animated game boards, all the while supporting multiple players collaborating to create and play in a shared story.

- Built graph model to manage the data for multi-user game writing, running, and playing; implemented on Neo4j graph database
- Built full-featured React front end that allows multiple users to concurrently participate in a single game
- Built back-end supplying REST APIs, data management, business logic, and security
- Built synchronization engine to ensure that data and UI is kept up to date across users and browsers
- Built interactive, animated, 2D game boards that use the synchronization features to give the feel of all users being on the same board simultaneously
- Setup hosting environment in AWS (Amazon Web Services) including data tier, application tier, web tier and routing, security, and deployment

Technologies: PixiJS, Java, Kotlin, Javascript, Typescript, CSS, Spring, React, Tailwind, Neo4j, Jira, Confluence, AWS

The Walt Disney Studios - Principal Architect

November 2023 - October 2024; Glendale, CA

Lead of a brand-new Architecture team. In this role, my goal was to improve the entire engineering organization by building shared tools, improving the quality of code across the organization, and improving engineering effectiveness.

Achievements:

- Created and expanded the shared User Management System, used by six applications
- Aligned processes around the multiple security reviews that all applications had to go through to simplify them for all parties
- Created and shared good practices and processes for software engineering, ticket estimation, and testing
- Built and supported shared code & tools, such as a shared OAuth compliant single-sign on for webapps

- Mentored developers - contractors and employees - to improve developer skills across the board

Technologies: Java, Spring, React, Javascript, Typescript, CSS, MaterialUI, PostgreSQL

The Walt Disney Studios - Senior Engineering Manager, Marketing & Executive Dashboards
October 2020 - November 2023; Glendale, CA

Engineering manager over a team of approximately 20-30 engineers. We built and supported applications for the executive team, the marketing team, and data in general for the Studio. Our flagship product was StudioONE, whose goal was to bring critical, time-sensitive data from all the production studios and human resource departments to the high level executive team.

I participated regularly in the details, leading most high-level design efforts and following that up by making sure the development team is both effective with their time and builds great software. I spent a lot of time mentoring and helping my team grow - both contractors and employees. I also worked closely with our infrastructure team making sure the systems are well supported and well run.

I frequently worked with customers and management of all stripes and levels. I really feel that it is important to have the technology team work directly with the customers. When technology talks directly to the customers, so much time is saved and so many things are learned by everyone involved.

My areas of focus:

- Participated regularly in the details, leading most high-level design efforts and helping with the toughest coding problems
- Worked to make sure the development team is both effective with their time and builds great software
- Worked across the organizations, partnering with other development teams as needed
- Mentored and helped my team grow - both contractors and employees
- Worked closely with our infrastructure team making sure the systems are well supported and well run

Technologies: Java, Spring, React, Javascript, Typescript, CSS, MaterialUI, PostgreSQL, Mongo, Neo4j, AWS, Gradle

Systems: Five web applications, three services

Developer count: 10-15 backend/data developers, 6-8 front end developers, 6-8 QA (both manual and automated)

The Walt Disney Studios - Principal Software Engineer, Marketing
April 2016 - October 2020; Glendale, CA

Lead engineer on Marketing applications for the Walt Disney Studios. I was brought on this project to both lead the development of new green-field applications and bring the existing systems into line. For this project, I led a team of roughly half a dozen in the development and upgrades of multiple systems.

Our premier application is Riley, which enables the Marketing department to create, collaborate, and share marketing plans for the theatrical release of movies. It allows editing and publishing of multiple plans across the dozen areas of focus within the department. It has a detailed security model, as pre-release marketing plans are highly confidential. It tracks and notifies of detailed changes to plans, allows cross-pollination of data across different plans, and produces targeted PDF and Excel reports.

Primary contributions:

- Architected, designed, and coded large amounts of the systems
- Contributed significant amounts of code, including many of the implementations central to the designs, such as our reusable single-sign-on component and PDF generation framework
- Worked closely with the product owner and the customer to ensure that business needs were properly prioritized and met; made sure the customers understood how the technical aspects affected their needs
- Led the development team - mentoring, prioritization, ensuring requirements were correctly translated to code

- Worked closely with the system engineers to provide the software engineering viewpoint and assistance to with the devops processes

Technologies: Java, Groovy, Spring, REST, React, Angular, Grails, Bootstrap, Javascript, CSS, PostgreSQL, Mongo, Maven

The Walt Disney Studios - Principal Software Engineer, KeyChest
August 2013 - April 2016; Glendale, CA

Lead engineer on KeyChest, the entitlement management system underlying Disney Movies Anywhere (DMA). Users of DMA would link their Disney accounts to their accounts from other streaming video providers, such as iTunes and Google Play. KeyChest handles the underlying connection between Disney and the other providers, accepting transactions from providers and synchronizing entitlements between the providers and DMA.

My responsibilities were primarily two-fold: engineering the KeyChest system and working with the providers on integrating their systems. Engineering responsibilities include all aspects of the system - software design, code development, automated test development, API design, and documentation. Working with the providers includes business discussions with partners, architectural planning and decisions, coordinating the development team, working with the testing team, and problem solving.

Notable contributions:

- Worked directly with the partners - Apple, Google, Vudu, Amazon, and Microsoft - ensuring they understand the business and technical requirements and working closely with their implementation teams. I traveled to each of the partners to work with their development teams in-person.
- Designed and implemented a Behavior Driven Design integration test suite that mocked five providers and multiple security systems, enabling completely automated functional testing of the entire KeyChest application
- Key contributor to the project requirements. Because KeyChest is primarily a backend system, a large number of requirements come from integration and operational needs
- Working with product and project management across the greater DMA project on any coordination needs
- Managing the day-to-day agile process - stories, tasks, bugs
- Leading the integration effort, working with development teams in Disney and at the partners

Technologies: Java, REST, Spring, Hibernate, Cucumber, SSL, OAuth, Memcache, ActiveMQ, SQL, Oracle, Angular, Android, iOS

The Walt Disney Studios - Principal Media Software Engineer
July 2010 - August 2013; Burbank, CA

Lead engineer on the Studio's asset ingest and management system for theatrical releases. The best way to explain the system is this: everyone knows of the commercials that speak of movies "from the Disney Vault...". There is actually a large storage system we call "the Vault". The Studio's asset management systems manage the storage and the transfer of movies in and out of the vault. The customers of this system are the various production and post-production teams both within the Disney Studios and in post production houses such as Deluxe and Technicolor.

The application consists of multiple services:

- Web UIs for asset selection, asset validation, process monitoring, and order management
- Workflow software to manage the varied asset processes
- Capacity-aware software used to schedule transfers in order to optimize the overall throughput over limited storage and networks

I held the roles of developer, project lead, and integration contact. I wrote significant amounts of code and tests for the project, made key architectural and design decisions, mentored new team members, and worked with the project partners (both within the Studio and outside post production houses). I had a significant role in nearly all of the services listed above.

Technologies: Java, Spring, Hibernate, CSS, Javascript, Bootstrap, HTML, Signiant (high speed transfers), Aspera (over-the-internet transfers), Large scale storage

The Walt Disney Company - Principal Technical Specialist
October 2001 - July 2010; Glendale, CA
Lead engineer on "The Hub" - the Disney's company-wide enterprise portal. This portal application served both 100,000+ Disney employees as well as various B2B interests. At the time, it was Disney's largest internal web presence and served as the gateway to all the on-line corporate communication, HR, payroll information.

One of the key business drivers for this portal was to allow business units from all over the company to produce applications and content that could be delivered with a consistent user interface, search method, and operational profile. My responsibilities focused on writing framework and integration code to enable multiple business units to work within this framework and working with customers in other Disney businesses to train and help them implement their applications.

Some of my contributions were:
- Designed and developed the portal's caching layer. A Vignette tech representative said at one point that the Disney portal was the fastest responding instance of Vignette Portal he had ever seen
- Designed and developed a Web Services for Remote Portlet (WSRP) implementation for the portal. This enabled different business units to develop and deploy their applications separately, but still have them surfaced within the portal
- Worked closely with the business units development teams to integrate their code within the Hub, providing technical assistance and review to help make their applications succeed

Technologies: Java, Vignette (now OpenText), JBoss, Web Services for Remote Portlets, Tomcat, JSP (Java Server Pages), Javascript

The Walt Disney Company - Technical Lead and Trainer
May 2000 - October 2001; Glendale, CA
Technical lead and trainer for the PayCORE system. PayCORE was part of a benefits provider outsourcing program - it took payroll records from the various company HR systems, built appropriate extracts of the data, sent those extracts to the outsourced benefits provider, and distributed the financial actuals back to the same HR systems.

I was brought on this project due to my experience as a technical trainer for Java, as this project was the department's first Java project. I was the lead designer for the system, wrote significant amounts of the code, and trained the other team members in Java.

Technologies: Java, SQL, Batch file processing

Cal Poly Pomona - Software Developer
June 1998 - May 2000; Pomona, CA
Primary developer on the Integrated Science for General Education project. This project sought to teach general science using a Systems Science approach, blended with computer-based instruction. The computer-based instruction used multiple techniques, from standard "presentation" approaches to computer based labs such as physics simulations.

Technologies: Java, Swing UI framework, Authorware, Flash

Cal Poly Pomona - Independent Instructor
June 1995 - June 2000; Pomona, CA

I taught short classes on the Java programming language, from introductory to intermediate topics. Primarily, these were contracting for the Extended University of Cal Poly Pomona. Most commonly, my students were software developers to whom Java was a new language, such as FORTRAN and COBOL programmers. The classes were either held at the University or on site for corporate clients.

Northrop Grumman Corporation - Software Engineer
August 1996 - June 1998; Pico Rivera, CA

Software engineer on web-based repair manual search system for Air Force planes. For this system, electronic versions of repair manuals were gathered from the many Air Force subcontractors, indexing data for them was stored in a object-store database, a Smalltalk application was built for the business logic of searching the database, and a web interface was developed in Perl and C for the users.

The team was primarily composed of FORTRAN and COBOL programmers. They didn't have the proper training to write object-oriented Smalltalk and although we had a training program in place, it was a large task to get them to the level of object-oriented developers. To enable them to contribute earlier in the project, I developed a domain-specific language for search and output formatting so that they could write in this DSL and contribute to the project while training.

Technologies: Smalltalk, Object database, HTML, CGI, C, Perl

Northrop Grumman Corporation - Software Developer
May 1994 - August 1996; Pico Rivera, CA

Software engineer on the mission planning software for the Open Skies Treaty. Responsibilities included developing code in Ada, assisting with demonstrations, and training. Developed the Autoplanner, which plotted a flight plan across a Lambert conformal conic map, producing a flip-chart for the flight crews to use in navigation

Technologies: Ada, C, Unix, Map projections

EDUCATION

California State Polytechnic University, Pomona
Bachelors of Science in Computer Science

References available upon request. A skill-focused resume is available at https://jamesclover.com.