Henry Williams

Senior Software Engineer

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SUMMARY

As a seasoned software professional with over **11** years of experience, I specialize in frontend tech-stacks and large-scale enterprise solutions. My expertise spans **React, Angular, PHP, .NET** and **Java**, enabling me to deliver robust and scalable applications. I have a solid foundation in Agile methodologies, TDD, and software engineering best practices. Renowned for my problem-solving acumen and effective communication, I consistently deliver successful projects across diverse sectors such as healthcare, finance, ERP, and inventory management.

PROFESSIONAL EXPERIENCE

Senior Software Engineer, Autosecure, Modesto, CA, Jun 2021 - Sep 2024

- Designed and developed an advanced security camera monitoring dashboard using **React** and **Node.js**, allowing security teams to view, manage, and interact with real-time camera feeds from multiple locations in a user-friendly interface.
- Built **highly responsive**, **mobile-first web applications** for security management, ensuring smooth access and real-time monitoring on both desktop and mobile devices, improving usability for security personnel in the field.
- Integrated IP-based cameras with **React** front-end applications, providing seamless streaming, video playback, and event notifications to enhance the efficiency of monitoring systems.
- Developed a React-based real-time alerting system that integrates with video analytics software, allowing for immediate notifications of security breaches, motion detection, and unauthorized access events.
- Utilized **Redux** for state management to handle complex data streams and enable efficient real-time updates across multiple camera feeds without impacting system performance.
- Developed an **Esri Leaflet**-based interactive mapping application that integrates with geospatial analytics, enabling real-time updates for tracking asset locations, monitoring environmental changes, and responding to incidents with precision.
- Developed interactive mapping features using libraries like **Leaflet** and **Google Maps API**, allowing users to view and control cameras across geographically distributed locations from a single React interface.
- Integrated secure authentication and role-based access control (**RBAC**) into the React application, ensuring only authorized users can access and control video feeds, aligning with security protocols.
- Leveraged **WebSockets** to enable real-time video streaming and data updates within the React interface, ensuring security operators always have up-to-the-second information and video feeds.
- Developed custom **WordPress** portals and integrated several plugins using **PHP**, enabling clients to achieve highly tailored functionality and unique designs for their websites.
- Built a camera playback system using React, allowing users to easily scrub through recorded footage, apply filters, and export clips, improving post-incident investigation workflows.
- Applied **TypeScript** within React applications to introduce strong typing for critical security components, ensuring robustness and reducing errors during runtime.
- Architected and implemented a robust backend infrastructure with **Node.js** and **Express**, creating RESTful APIs that support high-volume, real-time data transfer from multiple camera systems, optimizing response times for mission-critical security operations.
- Optimized the performance of the React application by using **lazy loading**, **code splitting**, and **memoization** techniques, resulting in faster load times and better user experience across devices.
- Integrated third-party libraries such as **Chart.js** and **D3.js** to display real-time data visualizations and analytics related to camera events, allowing operators to track security incidents with ease.
- Applied CSS frameworks like **Material-UI** and Styled Components to create sleek, responsive, and accessible user interfaces for security dashboards, enhancing both aesthetics and usability.
- Integrated cloud-based storage options within the **React** application, allowing users to store and retrieve video footage securely, with built-in encryption for data at rest and in transit.

- Implemented server-side rendering (**SSR**) with **Next** for performance-critical parts of the React application, improving load times and **SEO** rankings for cloud-based camera monitoring solutions.
- Utilized **Jest** to write unit and integration tests for core components, achieving over 90% code coverage and reducing bugs in production.

Software Engineer, TuSimple, Modesto, CA, Jul 2016 - May 2021

- Lead the design and development of highly responsive web applications using **React, Next.js, Node.js** and **TypeScript**, improving user engagement and functionality across multiple projects.
- Collaborated with cross-functional teams including UI/UX designers, product managers, and backend developers to deliver scalable, high-performance applications.
- Implemented reusable components and front-end libraries, reducing development time and improving the maintainability of codebases across projects.
- Designed and optimized **RESTful APIs** to integrate seamlessly with front-end architecture, ensuring smooth data flow and interaction.
- Spearheaded the migration of legacy codebases to React, enhancing application performance by 30% and modernizing the user experience.
- Applied **Redux** for effective state management, ensuring smooth and predictable application behavior in large-scale, data-driven applications.
- Integrated third-party libraries like **Axios** and **Formik** to enhance the functionality and efficiency of API requests and form handling within React applications.
- Enhanced web accessibility through adherence to **WCAG** standards, ensuring applications are usable by individuals with disabilities.
- Collaborated with backend developers to design **GraphQL** queries, ensuring efficient data fetching for security events, camera metadata, and footage, which improved the speed and efficiency of the React application.
- Managed complex client-side caching with React Query, resulting in a 40% reduction in network requests and improved user experience.
- Delivered responsive, mobile-first web applications using modern **CSS** frameworks such as **Tailwind** and Styled Components, improving cross-device compatibility.
- Leveraged within React projects to introduce strong typing, enhancing code maintainability and reducing runtime errors.
- Adopted **CI/CD** pipelines using tools like Jenkins and **GitLab CI** for seamless deployment of React applications, improving the team's delivery speed.
- Developed **Progressive Web Apps** (PWAs) using **React**, enabling offline capabilities and improving mobile performance.
- Implemented server-side rendering (SSR) with **Next.js**, resulting in faster page load times and improved **SEO** performance for critical projects.
- Collaborated with designers to translate Figma XD mockups into custom **WordPress** and **Drupal** themes with pixel-perfect precision.
- Created unit and integration tests using testing libraries like **Jest** and React Testing Library, achieving over 90% code coverage.
- Utilized version control tools such as **Git** for collaboration and codebase management, following best practices for branching and pull requests.
- Integrated authentication and authorization features using **OAuth** and **JWT** to secure React applications, ensuring compliance with security best practices.

Full Stack Developer, Bachoo, Modesto, CA, Jun 2013 - Jun 2016

- Contributed to the development of a financial management platform using **React**, collaborating closely with senior developers to enhance client transaction processing efficiency and user experience.
- Built responsive and interactive **React** components and **UI** elements, improving the performance and scalability of front-end applications.
- Assisted in the development of real-time financial dashboards using **React**, **Angular**, and **Angular Material**, enabling real-time monitoring and improved decision-making.
- Implemented state management using Redux and React Hooks to manage global state and optimize app performance.
- Developed and integrated RESTful APIs to ensure smooth communication between front-end React components

- and back-end services, improving data synchronization and processing.
- Helped modernize the application with a service-oriented architecture (SOA) using **ASP.NET**, contributing to reduced latency and increased system resilience.
- Contributed to the optimization of the data access layer using Entity Framework and **MS SQL** Server, improving interactions with the database and reducing data retrieval times.
- Supported **Azure** DevOps integration for version control, CI/CD pipelines, and scalable deployments using Docker and Kubernetes.
- Wrote **unit tests** and performed basic testing on application modules to ensure functionality and reliability, contributing to the overall quality assurance process.
- Worked with **Git** and GitHub for version control, collaborating with team members to manage code changes and resolve merge conflicts effectively.
- Contributed to the documentation of code and processes, creating and maintaining technical documentation to support ongoing development and facilitate knowledge sharing within the team.
- Gained exposure to **Agile** methodologies, participating in daily stand-ups, sprint planning, and retrospective meetings, and contributing to the team's progress towards sprint goals.

EDUCATION

Bachelor of Computer Science
University of California, Jan 2009 – May 2013

SKILLS

- **Languages**: JavaScript, TypeScript, GraphQL, HTML5, CSS, VBScript, C#, Python
- **Frameworks**: Angular, React, Blazor, ASP.NET MVC, WCF, ASP, Classic ASP, VB.NET
- **Libraries**: jQuery, Sockets, Salesforce API, Node.js, React, WinForms
- **Platforms**: AWS Lambda, AWS, Azure, Docker, Oracle, Twilio
- **Storage**: MySQL, PostgreSQL, Redis, Memcached, Couchbase, AWS S3, Elasticsearch, Oracle, Microsoft SQL Server, PL/SQL, Azure Active Directory, NoSQL, Cosmos DB, MongoDB, RabbitMQ
- **Paradigms**: CI/CD, REST, Service-oriented Architecture (SOA), Agile, Scrum, ETL, Unit Testing, TDD, Azure DevOps, MVC, Microservices