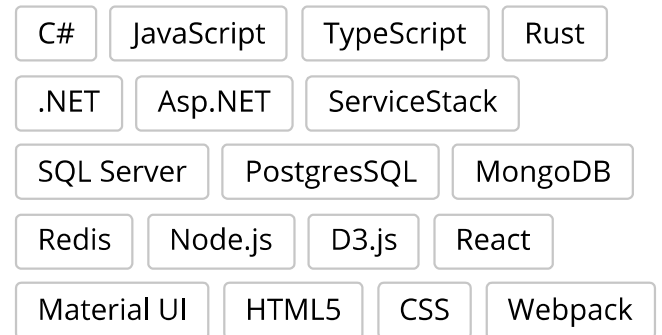# Ernie Wieczorek

Computer Software Developer

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📍 Philadelphia, PA

Ernie Wieczorek is an experienced software developer with a focus on web application development. He is capable of creating both client-side and server-side software, along with designing intuitive and functional user interfaces.

Specialties

> Data storage mechanisms, such as relational and non-relational databases.

> Front-end development of modern, interactive, and cross-browser compliant user interfaces.

> Ensuring that high levels of security are met at each layer.

Languages & Technologies

C# | JavaScript | TypeScript | Rust
.NET | Asp.NET | ServiceStack
SQL Server | PostgresSQL | MongoDB
Redis | Node.js | D3.js | React
Material UI | HTML5 | CSS | Webpack

⋈ Experience

YAWS

Project Owner & Developer (May 2020 – present)

Developed a progressive web application for generating and solving sudoku puzzles through the use of TypeScript, Rust, React, and HTML5 APIs such as Web Assembly, Web Workers, and Local Storage. The application is capable of running completely within any modern browser environment and does not require a server side connection after the initial load.

Accomplishments

> Developed core logic using the Rust programming language for consistent and improved performance in comparison to similar JavaScript implementations.

> Integrated with Webpack to leverage asset and dependency management, code splitting, content hashing, and build automation.

> Used TypeScript along with React and Material UI to create a responsive user interface that has the ability to fluidly scale between low resolution and UHD displays. The user interface also fully supports both desktop and mobile environments.

AnyAxis

Project Owner & Developer (Jan 2015 – present)

AnyAxis is a cross-platform device driver that enables various Inertial Measurement Unit devices to be used as an alternative input method when interacting with desktop applications. Its goal is to provide an improved user experience in areas such as accessibility, customization, and 3d interaction.

Accomplishments

> Used Rust, along with principles of data-oriented design, to create a generic device model capable of representing various input mechanisms, such as: physical buttons, analog inputs, touchpads, touchscreens, gyroscopes, and accelerometers.

> Designed and implemented a data agnostic architecture that enables device support across various protocols such as USB, HID, and Bluetooth.

> Utilized asynchronous IO to create a stream based input processing pipeline. The pipeline enables devices to be multiplexed, re-mapped, and output as other device types, without incurring any overhead from multithreading.

Intertrust Group

Developer (Apr 2011 – Oct 2014)

Responsible for the development and maintenance of Intertrust's Client Portal — a C# ASP.NET website encompassing tools for helping clients manage their corporate structure. Primary duties included: making the site operate as efficiently as possible, ensuring reliable integration with internal systems, designing flexible solutions for jurisdiction dependent requirements, and implementing features to help both Intertrust's clients and administrators alike.

Accomplishments

> Created a fully automated build, packaging, and deployment system using C#, MSBuild and TeamCity. The system was also capable of digitally signing generated packages to ensure that they could only be extracted and installed in environments for which they were intended.

> Constructed ASP.NET RESTful web services to allow independent document management systems to maintain control of documents on the portal.

> Helped re-style the website to match Intertrust's theme while also improving the site visually.

> Implemented a new .NET Membership-Provider to improve security by enforcing stricter authentication procedures. The Membership-Provider also added safer lock-out logic to prevent denial of service attacks and upgraded the mechanism used for securely storing sensitive client information.

> Leveraged D3.js to create an interactive diagram for visualizing relationships between entities and individuals.

> Improved site performance by optimizing code and incorporating tools such as non-relational databases.

Sabre Systems, Inc

Software Developer / .NET Programmer (Jun 2008 – Feb 2011)

Implemented and maintained internal C# and ASP.NET software solutions in accordance with project goals and changing business needs. Other responsibilities included providing user support and troubleshooting errors.

Accomplishments

> Worked in both individual and group environments to design, implement, and maintain multiple AJAX based applications for Sabre's corporate intranet website.

> Integrated ASP.NET MVC and Ext.Direct frameworks into Sabre's intranet website for the purpose of more effective and streamlined client and server communication.

> Helped redesign Sabre's internal website to accommodate hosting richer and more dynamic web based applications.

⋈ Education

Temple University

Bachelor of Science in Information Science & Technology (2005 – 2009)

> **Magna Cum Laude –** Graduated within top 5% of class (3.84 GPA overall; 4.0 GPA within major).

> **CIS Outstanding Achievement Award –** Annual award given to the graduating senior with the highest overall grade point average in Information Science and Technology.

> **CIS Junior Scholarship Award –** Annual scholarship awarded to one junior for excellence within the School of Computer and Information Sciences.

> **Dean's List at Temple University –** Maintained GPA within the top 16% of the School of Computer and Information Sciences throughout entire college career.

Stanford Online

Cryptography I (2013)

> Completed Dan Boneh's online Cryptography course with distinction.