

Eric Anastas

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Software Engineer

Accomplished software engineer with over 18 years of experience driving technological progress within AEC. Proficient building on third-party APIs, as well as standalone full-stack applications. Adept at understanding user requirements, finding innovative technical solutions, and independently learning new technologies as required. Effectively conveys ideas and concepts through clear documentation and diagrams. Produces robust and scalable applications by applying proven design patterns and object-oriented programming principles.

WORK EXPERIENCE

Skidmore, Owings & Merrill • 02/2008 - 03/2024

San Francisco, CA

Software Engineer • Full-time

- Designed and developed frontend and full-stack applications on top of a firm-wide data warehouse API using React, Angular, and Material Design.
- Assisted new senior engineers developing the firm-wide data warehouse API to understand the business requirements and appropriate data schemas.
- Built a general-purpose application to set up and audit resources on external SaaS collaboration platforms using Typescript, Node.js, and Express.
- Developed a suite of utilities to assist in the firms' adoption of Google Workplace using Typescript on Google Apps Script.
- Mentored colleagues, with no prior programming experience, develop tools with both visual programming and add-in APIs following established software engineering principles and patterns.

Digital Design Specialist • Full-time

- Designed and developed over 40 custom tools using the .NET APIs of Revit, Rhino, Grasshopper, and Navisworks. This includes tools for generating geometry, automating repetitive tasks, validating models, and design analysis.
- Designed and implemented a Revit Add-In Library system to package, version, and distribute add-ins across the firm based on package management systems like Nuget or NPM.
- Designed and implemented a system for tracking Revit usage across the firm built on Elasticsearch and Kibana that identifies and diagnoses problems and tracks usage metrics.
- Assisted designers in early concept design by creating Grasshopper definitions and scripts to solve complex geometry problems and perform analysis of designs.
- Served as a key member of the team upgrading the firm to use modern collaboration tools such as knowledge management platforms, and transitioning from local network drives to Google Drives. Worked with stakeholders to understand their needs, provided training, and developed migration utilities using third-party APIs.
- Oversaw the adoption of BIM in the firm since 2008. Provided direct project support, and training, and played a key role in the firm-wide groups responsible for developing and documenting the firm's standards and best practices.
- Supported a Research & Innovation subsidiary of the firm to systematize their research proposal review workflow by integrating it into a system of automated forms.

M. A. Mortenson Company • 07/2005 - 02/2008

Seattle, WA

Design Coordinator • Full-time

- Served as a primary technical expert on the Integrated Delivery Advancement Team (IDAT), playing a vital part in six out of nine R&D committees, including chairing the standards committee.
- Produced and maintained up-to-date 3D structural and architectural Revit models from 2D design documents, ensuring alignment with the latest design iterations and RFIs.
- Collaborated with architecture teams to address design issues found during the model creation process before causing problems in the field.
- Led regular 3D building system coordination meetings with subcontractors using Navisworks Clash Detective.
- Assisted project teams leverage 3D models on-site for planning, site logistics, and proactive problem-solving.
- Produced concrete lift drawings directly from the coordinated models for use by staff in the field during construction.

EDUCATION

BS in Civil Engineering

University of Washington • 01/1999 - 12/2005

Seattle, WA

PROJECTS

Sustainability Data Hub

The Sustainability Data Hub is used to track goals and metrics related to the energy use and carbon footprint of projects across SOM. It provides a platform for teams to enter data about their project and produces aggregate views of this information for management. I developed the front end using Angular, NgRx, and Material Design, working closely with other engineers on the design of the backend REST API.

Material Data Hub

Material Data Hub is an in-house catalog of architectural materials that serves as a central hub for SOM designers researching potential products. I developed the frontend interface using React and Material Design (Mui).

Collaboration Resource Manager

This application is a general-purpose system to automate the setup and maintenance of SaaS collaboration resources, such as project Google Drives and Groups. Initially built using TypeScript on Google Apps Script, I later ported this to a REST API built on Node.js, Express, and PostgreSQL. I implemented layers of abstraction to ensure the tool's versatility across various business contexts and resource types.

SKILLS

Software Engineering: Angular, Bootstrap, C# .Net, CSS, Data Structures, Docker, ER Diagrams, Google APIs, Google Apps Script, Grasshopper API, HTML, Javascript, Material Design, NextJS, NgRx, Node.js, Nuget, OpenAPI, PostgreSQL, React.js, Relational Databases, REST, Revit API, Rhino API, RxJS, Swagger, Tailwind, Typescript, UML Diagrams, Unit Testing, UX Design, WPF, XAML

Software: AutoCAD, Dynamo, Fusion360, Git, GitHub, Google Data Studio, Google Workplace, Grasshopper, Jira, Lucidchart, Navisworks, NPM, Revit, Rhino, Tableau, Visual Studio Code, Visual Studio Pro

Interests: 3D Printing, Camping, Cycling, DJing, Electronics, Hiking, Home Automation, Photography, Skiing