

Aidan Fahey

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Work Experience

Web Surfing Studios - Volunteer Software Engineer (*Remote*)

May 2025 - Present

- WSS Email Catcher API & React App

- **Led end to end development** of C# / .NET REST API and React App to manage Web Surfing Studios email database.
- Created endpoints to allow users to **list and query for all emails** sent by WSSEmailSender and **delete unwanted entries**.
- Designed a **dynamic and user friendly interface using React and Redux** to access API endpoints.
- **Accelerated email tracking by 500%** via React interface, **eliminating the need for raw SQL queries**.
- Utilized Entity Framework & migrations to **manage remote AWS RDS MySQL instances**.
- Constructed **CI & CD Azure DevOps** pipelines which connected **Git to AWS Elastic Beanstalk applications through Dev, Stage, and Prod environments**, **increasing deployment speed by 90%**.

- WSS Email Service API & Lambda

- Shipped **12 features to production** deployment.
- Developed a C# / .NET REST API to centralize and manage all email communications across Web Surfing Studios' web applications, **reducing redundancy and vastly improving security of AWS keys and secrets**.
- Utilized **API Gateway, AWS Lambda** (serverless) apps, AWS SQS, AWS RDS, AWS SES, and an **AWS Beanstalk** instance to **provide horizontally scaled processing**.
- **Removed 1600 lines of legacy code** used for specific emails by creating a **general purpose email service**.
- Implemented a partial batch response and global exception handler to pass successful messages and retain failed messages in the queue, **improving tracking efficiency by 150%**.
- Created MySQL database and C# library utilizing Entity Framework for storing/updating email data as they are processed.
- **Automated testing functionality using NUNIT**. Developed unit tests and **utilized Moq to handle integration testing against core injected dependencies**.

- Web Surfing Studios Candidate Portal (apply.websurfingstudios.com)

- Shipped **6 features to production** deployment.
- **Rewrote 100% of legacy frontend code in React**, and **migrated 100% of legacy backend into .NET Core Web API**.
- Created a reusable C# / .NET email template for candidate rejections, **significantly improving applicant review efficiency and enabling automated delivery of up to 400 emails per month in 5 minutes**.
- Implemented dynamic filtering for an internal candidate portal using AJAX and jQuery, integrating with a C# / .NET Framework background to persist filter states **enhancing filtering by 70%**.
- Implemented dynamic warning labels for an internal application view using Razor to highlight non-default application answers, **improving visual tracking by 100%**.
- Utilized latest industry standards of feature flagging all code in production with AWS AppConfig and logging all data to New Relic, **reducing debugging time by 200%**.

Education

College of the Holy Cross (*Worcester, MA*)

Sep 2021 - May 2025

- Bachelor of Arts - BA, Computer Science & Religious Studies | Dean's List
 - **Coursework:** Databases, Data Mining, Theory of Computation

Projects

Gear Crossroads (garcrossroads.com)

- Engineered a full-stack web application allowing users to create and share setups of various domains, such as gaming, photography, etc. Built with a C# / .NET backend, a Vue.js and Tailwind CSS frontend, Axios, Pinia, and AWS RDS MySQL.

Cnectd (github.com/afahey03/Cnectd)

- Created a full-stack React Native chat app built with Expo and a Node.js / Express.js backend. It allows users to register with a unique username, manage friends, and chat via direct messages or groups. DB done with PostgreSQL, Docker, and Prisma.

Mabel (github.com/afahey03/Mabel)

- Designed an object oriented programming language named after my Chow Chow, complete with a parser, lexer, compiler, and virtual machine written in Java to allow users to write and compile programs. Support for inheritance, recursion, etc.

Skills

- Languages: C# / .NET (Main), HTML/CSS, TypeScript, JavaScript, Python, C/C++, Java, Swift, PowerShell, YAML
- Frameworks: ASP.NET Core, ASP.NET MVC, Vue.js, Tailwind CSS, Express.js, React Native, Expo, WinForms, Bootstrap
- Libraries: React, Redux, jQuery, Pinia, Axios, Socket.IO, PyTorch, NumPy, Pandas, Scikit-learn, Matplotlib
- Version Control Systems: Git, GitHub, GitLab, Gitea
- Databases: Microsoft SQL Server, MySQL, PostgreSQL
- Agile Methodology & Azure DevOps
- DevOps: CI/CD Build & Release Pipelines, GitHub Workflows, Docker, Prisma
- Misc: Node.js, Entity Framework, Windows Installers, Windows Server & IIS
- AWS: Elastic Beanstalk, Lightsail, AppConfig, Secrets Manager, SQS, SES, RDS, Lambda, S3, CloudWatch
- Spoken Language: English (Native)