

Aidan Fahey

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Work Experience

Web Surfing Studios - Junior Software Engineer (Remote)

May 2025 - Present

- WSSEmailCatcher 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%**.
- WSSEmailSender 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 400 lines of now redundant 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 (<https://apply.websurfingstudios.com>)
 - Shipped **5 features to production** deployment.
 - Created a reusable C# / .NET email template for candidate rejections, integrated into an existing background service and processed via AWS SES, and built a front-end workflow to trigger 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)

September 2021 - May 2025

- B.A. Computer Science & Religious Studies | Dean's List
 - **Coursework:** Databases, Data Mining, Theory of Computation

Skills

- Languages: C# / .NET (Main), HTML/CSS, TypeScript, JavaScript, Python, C/C++, Java, Swift, PowerShell, YAML
- Frameworks: .NET, ASP.NET Core, ASP.NET MVC, Windows Forms (C#), Bootstrap, FastAPI, Express.js
- Libraries: React.js, React Native (Expo), Redux, jQuery, NumPy, Pandas, Scikit-learn, Matplotlib, MapKit, CoreLocation
- Version Control Systems: Git, GitHub, GitLab, Gitea
- Databases: Microsoft SQL, 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)

Projects

Cnectd (<https://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 (<https://github.com/afahey03/Mabel>)

- Designed 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.

WSS AI Help Bot

- Engineered an AI powered Help Bot using Node.js, C# / .NET, and AWS Lambda during a company-wide hackathon to allow users to ask commonly asked programming related questions on the WSS SSO site.