William C. Doyle

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Education

Worcester Polytechnic Institute   **Worcester, MA**
B.S. in Computer Science   May 2024

Skills

Programming Languages: C#, C++, Python, JavaScript, Java, SQL
Databases & APIs: Azure, MySQL, RESTful API, MS SQL
Frameworks: ASP.NET MVC, .NET Core, Entity Framework, React, React-Native
Software/DevOps Tools: MS Visual Studio, Git, Docker, Google Collab, VSCode, Expo
Agile Project Management Tools: Jira, GitHub Project, Slack
Data & Visualization Tools: Scikit-learn, Matplotlib, Pandas, PyTorch

Experience

Shoptaki   **New York, NY**
Software Engineer Internship, ML Team   *Jan - May 2023*
- Responsible for building Shoptaki's natural language solution for querying internal relational databases.
- Researched natural language models (commercial and open source) and selected models for deployment.
- Cleaned and Preprocessed WikiSQL training dataset in **Python** and **Pandas** for model training, ensuring high-quality and accurate datasets for analysis.
- Ran encoder-decoder models and compared overall performance/accuracy using **TensorFlow** on Google Collab.
- Led team organization and project structuring using **Agile methodologies**, coordinating tasks and ensuring timely delivery of project objectives.

Projects

Financial Literacy and Budgeting App   **Worcester, MA**
Full Stack Developer, Major Capstone   *Aug - Dec 2024*
- Developed a financial literacy and budgeting mobile web app with a small team for a business consultant firm under a strict **7-week deadline** on time.
- Designed and implemented the login, home, budgeting category, analysis, and student loan pages using Figma and **React-Native** in **JavaScript**.
- Integrated 4 of the **ASP.NET Web APIs** to connect to the **Azure SQL** servers storing user data including budgeting categories, user account info, authentication, and financial transactions in **C#**.
- Connected a Plaid API to connect users' bank information to seamlessly integrate users' electronic transactions.
- Integrated GPT chatbot into the app to offer personalized financial advice for users using Azure OpenAI API.

Blood MNIST Transfer Learning Model   **Worcester, MA**
WPI, Deep Learning Grad Course   *Mar - May 2024*
- Created a customized ML model for healthcare to detect cancer based on blood image data sets.
- Led team to implement a transfer learning model on the ResNet-18 CNN architecture and pre-trained on the public ImageNet-1k dataset using **PyTorch** for feature extraction.
- Adapted target model by freezing the convolutional layers for feature extraction and re-trained it on the Blood MNIST dataset to classify 8 different blood cell types.
- Achieved a classification accuracy of approximately 79% after training the model for 25 epochs, demonstrating strong performance in medical image analysis.

Medical Equipment Tracking Pilot   **Worcester, MA**
Full Stack Developer, Software Engineering Course   *Mar - May 2022*
- Worked with a team of 11 developers to create a medical equipment tracking and workflow Windows application with a hospital dashboard, floor map editor, and integrated service request modules for Brigham & Women's Hospital.   .
- Wrote back-end service requests in **Java** using **Apache Derby** database subsystems by utilizing UML use cases, OOP, sequence diagrams, and activity diagrams.
- Designed and implemented front-end UI item request pages using **JavaFX** and SceneBuilder.
- Applied **agile development** methodologies and participated in stand up meetings.