Pete Fyffe

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EDUCATION

Indiana University, Bloomington, IN   August 2022 - **May 2023**
Master of Science in Computer Science   Cumulative GPA: **3.66 / 4.0**
Indiana University, Indianapolis, IN   August 2019 - **August 2022**
Bachelor of Science in Computer Science   Cumulative GPA: **3.98 / 4.0**

WORK EXPERIENCE

Codebase Insights Heatmap — VSCode & IntelliJ IDE Plugin   October 2021 - May 2022

- Integrated and designed 6 codebase analysis algorithms to connect **GitHub** and **Jenkins** to a **Spring Boot** back-end
- Communicated with team of 7 people by methodically writing meeting notes and scheduling the timeline
- Adapted to changing requirements biweekly by updating documentation and the containerized AWS deployment

Software Developer — Furious Atoms Molecular Visualization   January 2023 - May 2023

- Expedited atom-connecting algorithm by 41% using a modified KDTree data structure in **Python**
- Developed high-performance molecule and protein visualization software and prioritized extensibility
- Kick-started development best practices by writing 32 unique **unit tests** and integration tests

Software Development Intern — Indiana Farm Bureau Insurance   May 2022 - August 2022

- Modernized 22 e-forms from 2003 .ASP into **ASP.NET C#** in 9 weeks
- Enhanced usability by writing **SQL** queries to extract user data preemptively
- Accelerated work pace by creating a system of MVC templates with which to create web pages

PROJECTS & RESEARCH

Vita Healthcare Management System — Full Stack Development   January 2021 - April 2021

- Collaborated with Agile team to develop 28 back-end server endpoints with a REST API microservices architecture and 49 front-end user interface components for software engineering capstone project
- Self-taught **Spring Boot**, **React**, **Redux**, and **MySQL**, then taught 3 non-technical team members how to use them
- Documented architecture design and test cases then deployed application on **Heroku** with **Docker** script weekly

Educational App for Cellular Senescence — **Computational Biology**   September 2022 - December 2022

- Published a **Jupyter Notebook** app to nanoHUB that teaches about the proteins involved in senescence
- Researched 17 source papers and constructed an *in silico* model accompanied by interactive **Python** widgets

Game Maker Engine — Java Design Patterns Project   October 2021 - October 2021

- Designed a component-based software architecture to demonstrate proficiency of object-oriented design patterns
- Transformed unusable code into a working game maker after a codebase swap with another team
- Led Agile Scrum team to ensure usage of **SonarQube**, **JUnit**, and **JIRA** and thus adhered to tight 2-week timelines

BatchLayout Graph Visualization — Data Visualization   September 2019 - December 2019

- Built a dynamic, user-friendly web application that plots the coordinates for a graph using only its edges
- Implemented zooming, panning, and vertex removal through **JavaScript** and **D3.js**

ACTIVITIES

Business Professionals of America Treasurer   August 2018 - March 2019

- Qualified for state competitions in **C#** Programming and nationals in Fundamental Spreadsheet Applications

TECHNICAL SKILLS

- **Languages:** Java, Python, C#, JavaScript, SQL, jQuery, C, HTML / CSS / SCSS
- **Technologies:** ASP.NET, Spring Boot, React, MongoDB, PostgreSQL, Android development
- **Tools:** GitHub, Linux, Jira, Confluence, JUnit, Docker, Jenkins CI/CD, Postman
- **Coursework:** Data Structures, Algorithm Design & Analysis, Design Patterns, Software Systems