

## Winston Shields

757-560-9788 | [winstonshields@gmail.com](mailto:winstonshields@gmail.com) | <https://www.linkedin.com/in/winston-shields-019b01188/>  
<https://github.com/WinstonShields> | <https://winstonshields.github.io/>

### EDUCATION

**Old Dominion University** | Norfolk, VA  
*Bachelor of Science in Computer Science*  
Major: Computer Science  
Minor: Computer Engineering

August 2021  
GPA: 3.64

**Old Dominion University** | Norfolk, VA  
*Master of Science in Computer Science*  
Major: Computer Science

August 2022  
GPA: 3.76

### RELEVANT COURSEWORK

Software Engineering, Data Structures & Algorithms, Object Oriented Programming, Principles of Programming Languages, Operating Systems, Intro to Unix, Discrete Structures, Theoretical Computer Science, App Development for Smartphones, Internet Concepts, Web Programming, Artificial Intelligence, Computational Methods, Game Development, Fundamentals of Computer Engineering, & Information Retrieval

### RELEVANT EXPERIENCE

**CoStar Group** | Norfolk, VA  
*Software Engineer I*

May 2022– Present  
February 2024 - Present

- Developed a user interface for a company-based view for contact-based prospects and the service for querying and aggregating that data.
  - Used Elasticsearch queries and aggregations to aggregate the data by company and optimized searching by using n-gram tokenizers and address and location-based synonyms. C# was used for this.
  - Used TypeScript and React.js for developing the frontend.

*Associate Software Engineer*

May 2022– February 2024

- Developed features for web tool that allows sales reps to easily manage territories and other reps in the sales hierarchy with a user interface rather than through the database. Frontend work with React.js, backend with C# and SQL Server Stored Procedures.
  - Created feature for exporting sales hierarchy from website to CSV
  - Created feature for viewing audit history of the sales hierarchy by fetching data from the database and returning it on the frontend.
  - Created webpage on frontend where those with the required role can view contacts assigned to certain territories.
  - Created several endpoints for the sales hierarchy.
  - Created unit tests for functionality in the tool.
- Enhanced features in interactions web page.
  - Sped up the execution time of exporting data by utilizing asynchronous JavaScript.
  - Made it so that users with the correct roles to edit their team members tasks.

**Torrential Data Solutions** | Virginia Beach, VA  
*Software Engineer Intern*

May 2021– August 2021

- Added and fixed features on legacy scan client software with C#.ul>  - Made it so that settings will remain saved on the user's computer even if the software is updated.
  - Made it so that if the scanning job is interrupted, the user can continue scanning where they were left off.
  - Added warning if user tries scanning a document of a large size.
- Added and fixed features on legacy manager for easily handling the SQL databases with C#.ul>- Added panel that allows an employee to enable a feature called "Quick Link" through the manager.
- Fixed features on the frontend for the web Document handling website with Vue.js.
  - Made it so that documents can be sorted by datetime regardless of how the dates are formatted.
  - Fixed issue where documents were not being split properly when the "Split document" button was clicked.
  - Fixed issue where number of words left were not displayed.
- Used Azure DevOps to create and handle user stories, bug fixes, and creating pull requests.

**Old Dominion University** | Norfolk, VA  
*Undergraduate Research Assistant*

December 2020 – May 2022

- Built patent figure search engine and scholarly article search engine.
  - Designed website frontend and visuals with HTML, CSS, & JavaScript.
  - Designed backend that handles searching and user registration with PHP, Elasticsearch, & MySQL
- Developed fake scientific claims analysis website.
  - Designed frontend layout with React.js and backend for searching and user registration with Node.js, MySQL, & Elasticsearch

**Old Dominion University** | Norfolk, VA  
*Undergraduate Research Assistant*

September 2019– August 2020

- Computer Vision based behavioral imaging with clinical measures of Autism Spectrum Disorder.
  - Debugged and added to a C# program that collects data on test subjects.

## Class Projects, Old Dominion University | Norfolk, VA

- Super Mario Bros. first level recreation with Unity Game Engine and C#.
  - Used C# to write scripts for player, enemy, and camera movements.
  - Wrote C# scripts to trigger animation sequences, when necessary, for example, Mario stomping a Goomba or hitting a block.
  - Handled the health of Mario and his enemies with a C# scripts.
- Android Fitness application that allows logging workouts and sharing workouts with friends.
  - Used Android Studio to code workout logging, scheduling, and sharing workouts with friends functionality.
  - Designed activity layouts with XML.
  - Wrote code to store data in SQLite and Firebase Cloud Firestore database.
- Reproduce an inputted image with triangles by using a genetic algorithm with Python.
  - Used a fitness function to compare a population of randomly generated images to the target image to select the best images for reproduction.
  - Used a crossover function to combine the traits of the two best images to look closer to the target image.

## SKILLS

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- C++, Java, Python, JavaScript, TypeScript, HTML, CSS, PHP, SQL (MySQL/SQLite), C# (.NET), React.js, Node.js
- Android Studio, Firebase, Unity, Git, Linux, Elasticsearch