

Michael Shields

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Looking to utilize my skills and knowledge to solve complex problems and find solutions through coding and other aspects of computer science.

Education

University of Pittsburgh

Bachelors of Science - Computer Science
GPA: 3.63

Pittsburgh, PA

2011-2015

Experience

The Bank of New York Mellon

Software Developer

Pittsburgh, PA

April 2017–Present

- Engineered a web application that allows users to generate access forms entirely on their own, normally a job requiring a developer. Users can open existing forms from a database, open them from local CSVs, and export/save created forms to CSV. Application increases form throughput exponentially.
- *Java/Spring/Angular 4*

Northrop Grumman

AWACS Software Engineer

Baltimore, MD

June 2016–April 2017

- Added fault detection messages to the Airborne Warning and Control System (AWACS) radar GUI, by alerting the operator of a software or hardware fault, an example being the processors overheating.
- Extracted data using bitwise operations from messages being sent from a new processor board in the system to accurately detect any faults the system may be having.
- *C++/Ada/Clearcase/Clearquest/Visual Studio 13/UNIX*

VADER UI Engineer

January 2016–June 2016

- Added new UI functions for the ground operator to the Vehicle and Dismount Exploitation Radar (VADER). Added a function that allows the operator to adjust the height of the aircraft by inputting the desired altitude to fly to, allowing the operator to simulate different heights for target detection.
- Created a function that takes latitude and longitude as input and pinpoints that location on the virtual earth map of VADER.
- Used the Qt framework for some backend messaging in a separate VADER application to slightly decrease latency and clean up the code.
- *C++/C#/Qt/Visual Studio 10/Visual Studio 13*

Software Engineer

July 2015–January 2016

- Created a file converter to convert text files to program specific binary files for the multi-million dollar radar they are used on.
- Created new algorithms for the radar to read the files and enable new radar modes in real time.
- Tested the successful addition of all of the new radar modes while retaining superior target detection.
- *C/C++/Clearcase/Clearquest/Eclipse*

Northrop Grumman

Baltimore, MD

Software Engineering Intern

May 2014–July 2014

- Created a virtual Windows and Linux environment for software testing.
- Created scripts for interfacing to several remote hardware devices for testing the sending and acquisition of data from those devices.
- Created a messaging API for sending commands via XML to the hardware on the virtual testing environment.
- Created a user manual for the product and an interface control document for the messaging API.
- *Python/Git/Linux*

Projects

Pokecontacts

Android Application

- Android application that takes and alphabetizes the user's contacts into a contact list, with the user able to select a Pokemon avatar for each contact. New contacts are dynamically added to the contact list.
- Implemented an indexed list on the application's front page for quicker navigation of finding contacts.
- Each contact has the usual phone operations, text and calling, along with options to change the contact's avatar, hear its cry, or display its type. Internal storage operations allow the user to customize their contact list and save each contact's avatar.
- Applied the Fresco library for graceful loading and displaying of animated gif files, used for the contact avatars.
- *Android SDK/Java/XML/Fresco*

Technical skills

Java, Spring Framework, Android SDK, Android Studio, JUnit, Lombok, Maven, Gradle, C/C++, Python, C#, Linux, UNIX, Git, HTML, Qt, VirtualBox, Javascript, vi, Ada

Clearances

Secret Clearance