Kade Perrotti

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Education

Rochester Institute of Technology — Rochester, NY
Bachelor of Science in Computer Engineering — *Aug. 2018 – May 2023*

Experience

Software Engineer Intern — June – August 2021
Fidelity Investments — *Remote*
Authorization and completion of responsibilities for Fidelity's mobile apps were tracked manually, leading to inefficiencies in release triage meetings. Constructed a python framework with a set of modules to automate search of release stakeholders and gather them in meetings as part of a team of two.

- Identified by mobile teams to save Fidelity nearly $100,000 per year.
- Automatically generates release-debrief webpages and personalized emails providing truthful accounting of work completed, thereby reducing low level status updates at meetings.
- Designed to be easily portable to other non-mobile teams, helping them achieve cost savings.
- Data collected from various APIs (uDeploy, Artifactory, Stash, Jira, Confluence).

Software Engineer Intern — June 2020 – April 2021
Alion Science & Technology — *Syracuse, NY / Remote*
Implementation of a proprietary Java communication standard was needed in C++. As part of an Agile team, implemented protocol from requirements using Object-Oriented design methodologies.

- Reduced implementation time by 75% by creating Python script to automatically translate Java messages to C++ according to Alion standards.
- Designed from the ground up, from orderly inheritance hierarchy to serialization and deserialization of over 150 messages.
- Created automated loopback test that sent messages between two machines, verifying that sent message is identical to received.

Created a python program that displays collected WIFI network information in a terminal-UI, and allows a user to perform a deauthentication attack on selected network(s). Significantly higher attack success compared to other software due to channel capture.

- Network detection 30% faster than airodump-ng [Aircrack-ng]
- Utilized an oversight in the 802.11 WIFI protocol to execute deauthentication attack

Projects

ResumeTracker | *React, Node, MongoDB, Git* — Present
Resumes go through many iterations and tailorings during the job search process. Tracking these changes and which companies were applied for is often done using spreadsheets. ResumeTracker provides a more organized and userfriendly way to version control resumes.

- Add searchable tags to resume iterations such as companies applied/interviewed/received offers.
- Utilizes token based authentication (JWT) instead of server sessions.

Country Information | *Docker, React, Python, Bash, Git* — Summer 2021
An exercise in containerizing an application that uses multiple different technologies. Contains a React frontend, a Python script to collect and generate data, a json-server to host data, and a Bash facilitation script. A user would need to install many tools and dependencies to run the application from source, so a docker container was created for ease of use.

- Users search for countries in the React frontend, and information is displayed to them.
- Data is gathered and generated by Python script for React webapp.

Original Quality Photo Share | *Android App* — Spring 2020
Android lacked a simple way to share uncompressed photos and videos with other users. Created a peer to peer photo/video sharing application.

- User selects files to share, then scan's receiver's QR code to begin sending.
- Encode QR codes using ZXing, decode QR codes using Google's Mobile Vision API.
- Utilizes Multithreaded IO Server to facilitate connections.