Colby L. Sawyer

835 NC Hwy 343 South, Camden, NC 27921   (252)-333-4057   colbysawyer37@outlook.com
http://colby-sawyer.com

Objective:

     A diligent professional and published academic, who has become proficient in time management, team communication, customer experience and change management. Experienced in technical writing and maintaining software from inception to realization. I possess an ability to quickly adapt to situations requiring high degrees of accuracy and competing demands.

Work Experience:

Software Developer   August 2021 – Current
East Carolina University – Greenville, NC

- Improved and expanded Generic Virtualization Service (GVS) consisting primarily of Python and Java to dynamically configure virtualized resources across international network hardware.
- Implemented a full scale open-source CMDB solution (CMDBuilld). Including the configuration of a database (PostgreSQL) and virtual Apache web server with HTTPS and public addressing to operate as the CMDB user interface.
- Administered a DMS (Alfresco) service via CMIS 1.1 to the operating CMDB for document management. This includes the configuration of a database (PostgreSQL) and virtual Apache Tomcat web server with HTTPS and public addressing.
- Implemented redundancy procedures for CMDB and DMS by establishing a local and cloud backup (Google Cloud) as well as full restoration capabilities.
- Contributed to IP addressing and overall network structure planning for a multi-campus international network. This includes the configuration of various Dell servers (Linux) and Juniper/Cisco routers and switches.

Locations: Ashburn VA; New York City, NY; Amsterdam, NL; Paris, FR

Software Engineer - Intern   November 2020 – February 2021
Maverick Solutions – Wake Forest, NC

- Developed and modified customer-facing web applications for an Oracle learning platform.
- Worked constantly within entire business organization and team to develop new innovative solutions.
- Documented and heavily tested existing and new portions of the codebase (Javascript).
- Implemented new multiple file selection features to support customer uploads of large amounts of image files to the platform. This required writing to a Google Firestore Real-Time Database the images after they had been properly size constrained.
- Removed various bugs during image file display (proper screen sizing) and in some cases during an image replacement action.

Freelance Software Developer   January 2020 – Current
Greenville, NC

- Created and sold a customer-facing form iOS application that used customer entered data to alert, based on customers inputted location, the correct agent to complete the transaction. An SQLite Database held all contact information for agents. Customers were able to directly send agents emails or SMS messages to begin interaction.
- Mobile application was well documented and debugged (including testing documentation) for further development.
- Created various public websites showcasing basic information (prices, contacts, location) for local small businesses.

Technologies: Swift, Firebase (Authentication and Firestore Database), GitHub Pages (Hosting), Google Domains, SQLite

Academic Research – Multidisciplinary (ITCS/CS)   August 2019 – August 2021
Dr. Ciprian Popoviciu - East Carolina University - Greenville, NC
General/ Pi-Pirates Lab Group:

- Designed, with several other researchers, a collection of small computing modules mounted to Cisco WebEx technology monitoring network connectivity issues; in the hopes of preventing/mitigating downtime for IT lacking areas.
- Designed, implemented, and managed website for the display of team's activities to the public and other web-based interfaces to provide a login portal and dashboard displaying machine learning data. The dashboard was facilitated mostly by a Google Firestore Real-Time Database and the authentication feature of the portal was handled by Google Firebase's Authentication API. Hosted with GitHub Pages (see link below).

- o Handled set-up of various physical and virtual labs. (Physical network devices, Raspberry Pi units, Docker images, OpenStack, OpenNSA, CentOS, Phoronix Test Suite).
- o Contributed to academic publications using various written and graphical data.

https://pi-pirates-ecu.github.io/PI-Pirates-Site/

BRIDGES Group:

- o Designed, implemented, and managed website for the display of team's activities to the public and other web-based interfaces to provide a login portal and dashboard for file management and future expansion. The dashboard was facilitated mostly by a Google Firestore Real-Time Database and the authentication feature of the portal was handled by Google Firebase's Authentication API. Hosted with GitHub Pages (see link below)
- o Contributed to set-up of physical testing lab at East Carolina University. Including a server running OpenNSA and Openstack, along with other devices to support/test a GVS environment.

https://cpopoviciu.github.io/BRIDGES/

Application Support & Development Internship Summer 2020
8 Week Program, – First Citizens Bank – Raleigh, NC
- o Created a new database search tool, with user interface, facilitating the collection and organization of various business unit Server-to-Application connections. (MS Access, SQLite)
- o Documented creation process and change management plans for newly created tool.
- o Provided support for various customer support issues

Engineering Internship Summer 2017 & 2018
10-12 Week Program, – Dominion Energy - Elizabeth City, NC
- o Determined facility design for material, time and cost estimates for the construction and maintenance of residential electrical constructions; as well as relocation of distribution facilities maintaining company and legal constraints.
- o Maintained constant communication with customers to provide timely and satisfactory service.

Publications:

Sawyer, Colby Lee. 2020. *Deploying a Network Management Overlay for Education Video Conferencing Services*. 2020 ASEE Virtual Annual Conference. https://www.asee.org/public/conferences/172/papers/29604/view

Sawyer, Colby Lee. 2020. *A Multidisciplinary Project: Deploying Edge Computing to Augment Endpoint Functionality*. 2020 ASEE Virtual Annual Conference. https://www.asee.org/public/conferences/172/papers/29638/view

Skills:

- o **Various SaaS:** (Phoronix Test Suite, Citrix Workspace, VMware, OpenNSA)
- o **Programming Languages:** (Python, Java, C+, CSS, HTML5, SAS, JavaScript, Kotlin, Swift, Prolog, Haskell)
- o **Cloud-based Workflows:** (GitHub, Jira, Git, Kanban, Trello)
- o **Application Tool/API Integrations:** (Google Firebase, Google Cloud Platform)
- o **Workflow Management Frameworks:** (AGILE/Scrum)
- o **Database Creation and Management:** (SQL, SQLite, MS Access, Google Firestore)
- o **IoT/Virtualization/Containers:** (Balena, Docker, Kubernetes)
- o **Operating Systems:** (Windows, Mac, Linux, Raspbian, BalenaOS, RHEL)
- o **IaaS experience:** (Google Cloud Compute Engine & Persistent Disk, OpenStack)
- o **Network Management:** (Physical/Virtual Device Configuration (Switches, Routers, Servers))

Education:

Bachelor of Science - *Computer Science*
w/Minor - *General Business Administration*
East Carolina University Greenville, NC
Spring 2021