

Jacob H. Motley

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Professional Summary

As a first year Graduate student in Cyber Security, I am seeking an opportunity to gain professional experience in the field through an internship. This year, I am participating in the NIST Media Forensic Challenge (OpenMFC) to gain experience in applications of Deep Learning to Cyber Security. I am a member of the CyberCorps Scholarship for Service (SFS) program at UTC for service in the government sector after graduation.

Education:

Master of Science in Computer Science: Cyber Security

The University of Tennessee at Chattanooga

Expected Graduation May 2022

Bachelor of Science in Computer Science: Software Systems

The University of Tennessee at Chattanooga

Fall 2017

Research Experience:

Graduate Research Assistant

University of Tennessee at Chattanooga

August 2020 to December 2020

Chattanooga, TN

- Collaborated with and managed a small team to coordinate project efforts.
- Measured the relationship between Average Tweet Sentiment and OxCGRT (Oxford COVID-19 Government Response Tracker) U.S State Government Stringency Indices by U.S States.

Work Experience:

Application Developer

Covenant Transport

March 2019 to June 2020

Chattanooga, TN

- Created full-stack web apps using Microsoft SQL, Entity Framework, ASP.NET Core APIs, Angular, and usually focused on domain-driven design.
- Developed a mobile web application for Covenant's drivers to view their Driver Scorecard metrics.
- Organized application development efforts using Microsoft Azure DevOps for source control, Agile planning, and CI/CD.

Junior Software Developer

February 2018 to February 2019

Barcom, Inc.

Chattanooga, TN

- Developed database-centric systems for customers in manufacturing industries and integrating with assembly line tools and label printers.
- Created in-flight barcode scanning DJI drone app using Python and DJI drone for programming challenge.
- Programmed using ASP.NET Web Forms, .NET Win Forms, and MSSQL.

Volunteer Research Projects:**HerbASAP**

March 2019 to May 2020

UTC Botany Lab

- HerbASAP was created to automate image post processing for natural history collections using CNNs (convolutional neural networks).
- Developed a boss-worker multithreading class using QT's implementation of Python threading so HerbASAP could run Neural Network tasks simultaneously.

collNotes

April 2017 to Present (Maintenance)

UTC Botany Lab

- collNotes is a cross-platform mobile app that replaces, or supplements, a field biologist's traditional field journal.
- Implemented automated build and testing using Azure Pipelines, and added error logging from each user using Visual Studio App Center.
- Created an Android and iOS App using Microsoft's Xamarin Forms development kit.

collBook

April 2017 to May 2019

UTC Botany Lab

- collBook is a cross-platform PyQt Desktop application used to refine field notes collected with collNotes into portal ready Darwin Core files and specimen labels.
- Collaborated with Botany graduate students and coordinated efforts to create a table structured field note editor.

Technical Skills:

- .NET Core/Framework
- .NET ORM (EF, EFCore)
- Angular
- .NET Xamarin
- Python, Anaconda
- Jupyter Notebook
- Data Science
- Natural Language Processing
- Git, Github
- Docker
- Azure
- Google Cloud
- Amazon s3
- Nmap
- TryHackMe
- Bash, Powershell

Soft Skills:

- Presentation
- Adaptability
- Managing Teams
- Respectfulness
- Accepting feedback
- Perseverance
- Self-motivated
- Business ethics

Conferences:

- Presented at Associated of Southeastern Biologists in March 2018 on *Developing and Testing Expedient SERNEC Data Entry Solutions: a proposed modification to the SERNEC/Symbiota portal to speed data entry from images.*

Publications:

- An article in which I was a co-author in the Applications in Plant Sciences Journal was published on August 23, 2019 on the collNotes and collBook applications:
<https://bsapubs.onlinelibrary.wiley.com/doi/full/10.1002/aps3.11284>

Groups

- QinLab
- CyberCorps Scholarship for Service (SFS)
- MocSec