Emma Taylor

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Work Experience

FarrPro Inc, Iowa City, IA   August 2019- Current
 Day

- *Software Engineer*
    - *o* Software Developer for current company projects.
        - Use Android Studio to develop an app with Bluetooth and NFC capabilities.
        - Published developed app for beta testing with Google Play Council
        - Create a user interface that collects and presents data with built-in graphs and table displays.
        - Develop and manage Fragment and Activity Navigation
        - Development of User Interface with Figma
        - Manage Bluetooth low-energy connections and packet transmission
            - *o* Discover creative alternatives to Near-Far issues in Mesh Protocols
            - *o* Priority Scheduling for data-collecting peripherals
            - *o* Parse data from received packets
            - *o* Communicate data trends
        - Forward collected and inputted data to a remote database asynchronous
            - This required Andriod Volley Library and multithreading in the app
        - Database communication uses Andriod Volley Libray to call the corresponding PHP to connect the app to the MySQL database on the remote server.
        - PHP's are used to move, modify, delete, and send data based on the app's request.
        - Using RFIDs with NFC to allow users to pinpoint the data page they would like to preview
    - *o* Sole software developer for firmware development of FarrPro Haven MicroClimate
    - *o* Co-Manage a software development team
        - *o* Plan and lead team meetings to discuss current issues, short-term, and long-term goals

- *Lab Assistant Intern*
    - *o* Proof of concept projects often needs to have a user interface, collect data, and present data in an intuitive graph. Then calculations are performed to check the rate of change and the accuracy of the data. These mathematic equations were made from the data to predict future outcomes.
    - *o* Misc tasks included performing weekly maintenance on 3D printers, writing code used for various lab tests, programming Arduino's, Beagle Bones, and Raspberry Pi's, communicating experimental data, organize lab and workshop stations.

Skills

- *Programming*
    - *o* Fluent
        Languages: Java, C/ C++, PHP, SQL, Python
        IDEs: Android Studio, Arduino IDE, Visual Studio Code, JetBrains, Figma
        Programs: Microsoft Office, Google, Slack, Teams, Zoom, Jira, GitHub
    - *o* Recognizable
        Programs: Acrylic Studio, Putty, MatLab, Angry IP Scanner

- *Equipment*
    - *o* Fluent
        Boards: Arduino, ESP32
        Equipment: 3D Printers
    - *o* Recognizable
        Boards: Beagle Bone, Raspberry Pi
        Equipment: Bootloader, Oscilloscope

Academic Information

The University of Iowa, Iowa City

College Major: Computer Science and Engineering, Electrical Engineering, Mathematics Minor