Nick McCullough

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Education

Iowa State University Ames, IA
Bachelor of Science, Software Engineering *Aug. 2021 – May 2025*

Professional Experience

Software Engineer Intern July 2022 – Apr 2023
John Deere *Ames, IA*

- Collaborated with senior software engineers on the Product Engineering team to develop, maintain and test vehicle and system software, control systems and GPS guidance systems for tractors and large square balers.
- Contributed to development and testing of new Java and C internal software solutions, conducted code reviews.
- Developed 100+ scripts to automate and display vehicle data for team meetings using Python and MATLAB.
- Excelled in self-learning vehicle software UI, autonomy and many solo engineering projects to support team.
- Skills: Java, C, Python, MATLAB, git, GPS vehicle software, automation, embedded systems, controllers, sensors.

Account Resolution Specialist 3 July 2020 – May 2022
Wells Fargo *West Des Moines, IA*

- Provided customer service and partnered with customers to help their situation, provided COVID assistance.
- Negotiated with customers daily for terms on repayment to help them keep their account in good standing.

Specialty Legal Feb 2013 – Dec 2019
Toyota Financial Services *Cedar Rapids, IA*

- Managed a $3 million-dollar portfolio of 100+ accounts daily, keeping in three-day compliance. Initiated complex repossession process from tow yards. Negotiated with tow yards on fees and customers for payment or collateral.
- Achievements: Repossessed $500k+ in vehicles from same customer. Impound negotiations $125k in one month.
- Progressively promoted through the following departments: Early-Stage, Mid-Stage, Late-Stage, Specialty Legal during my tenure. Experience in collections, impounds and seizures, probate, bankruptcy and military SCRA.

Software Engineering Projects

Ames Classroom Finder App | *React Native, JavaScript, Firebase* Apr 2023 – Present

- Currently developing a mobile application that enables students, athletes, faculty, and guests to easily find any of the thousands of classrooms across Iowa State University's campus, spanning over 180 buildings.
- Creating the app's structure using React Native and JavaScript, with Firebase for user authentication.
- Manually researched all building information and location data via parsing ISU facilities and planning website.
- Integrating Google Maps API to display campus map, location and direction from user's current location.
- Testing and iterating app development with small user test cases for ongoing improvement and UX.

Aerospace Density Altitude Calculator | *Python, MATLAB* March 2022

- Developed user interactive application using Python and MATLAB to calculate if an aircraft was within weight and balance requirements to fly. Pulled local airport API to display real-time density altitude.

Multiple Java Games | *Java, Back-end development* Aug 2022 – Present

- Developed multiple Java games using Object-oriented Programming. These can be visualized on my GitHub page.

Aerospace Experience and Team Leadership

Cyclone Rocketry Student Club | *Avionics Subteam, Spaceshot Committee* Aug 2021 – Present

- Optimize rocket avionics GPS trajectory with C++ and multiple sensors on flight board, analyze data post-flight.
- Support all sub-teams and leadership. Lay ongoing foundation for future students to reach the Karman line.
- May 2022: Successfully managed team of four students to research and design Lockheed SR-71A Blackbird model.
- Dec 2021: Successfully managed team of seven students to design, build and manufacture an aircraft from scratch.

Technical Skills

Programming Languages: Java, Python, JavaScript, HTML5, CSS3, C, C++, Swift, Perl, SQL, MATLAB
Software Frameworks: React, React Native, NodeJS, ExpressJS, ThreeJS, Flask, JUnit, Angular, Django, Flutter
Developer Tools: Git, GitHub, Eclipse, Intellij, VS Code, Visual Studio, Docker, Google Cloud Platform, PyCharm