Benjamin R DeSollar

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Education

The University of Iowa | Iowa City, IA   Aug 2019-May 2023
Bachelor of Computer Science and Engineering (B.S.E)

The University of Iowa | Iowa City, IA   Aug 2022-May 2024
Master of Computer Science (M.C.S)

Engineering Experience

John Deere, Moline, IL   May 2022-Aug 2022
Software Engineer Intern
- Modeled, designed, and implemented policies using OPA (Open Policy Agent) Gatekeeper that maintained security within Kubernetes clusters by enforcing rulesets
- Developed and incorporated rego code in policies utilizing test-driven development to increase efficiency by 50% and ensure correctness and validity of written code
- Managed and deployed apps in Kubernetes using Kubectl in conjunction with Senior Software Engineers

Collins Aerospace, Cedar Rapids, IA   Jun 2020-Aug 2021
Software Engineer Co-op/Intern
- Wrote python programs for the analysis of extensive data collections. Applications determined the accuracy of avionic program requirements. One such use case increased the efficiency of scanning for errors by 98%
- Spearheaded a project whose purpose was to combine the uses of 5 essential tools in development. All tools were related to automation of data analysis and reduced work time by 92%
- Coordinated with senior software engineers to evaluate and improve data collection from multiple Restful APIs and enhanced time complexity of algorithm from $O(2^n)$ to O(n)

Projects

Election System (Python, Flask, HTML, MySQL)
- Deployed a web application for an election system using Python and Flask
- Leveraged flask as the framework to implement an interactive application that allowed users to create and vote in elections
- Added a database using MySQL to store and retrieve data

Vaccine Confirmation App (Java, JavaFx, HTML, MySQL)
- Developed a vaccine confirmation application for community events and company properties
- Utilized Javafx to present an interactive GUI to allow the user to modify and view data
- Implemented Two-Factor authentication for users, preventing up to 99.9% of automated attacks

University of Iowa ECE Department, Iowa City, IA   Aug 2021-Present
Teaching Assistant
- Delivered a range of teaching and assessment activities, including tutorials directed toward learning Java and C++
- Participated in the assessment process using a variety of methods and techniques to provide practical, timely, and appropriate feedback to students
- Involved in the development of new material for department courses, such as Software Design and Engineering Computing

Leadership

UIowa Hyperloop Club, Iowa City, IA   Aug 2020-Present
Executive Board/Systems Lead
- Led a team of 15 members in designing software for a pod to compete in the annual SpaceX hyperloop competition
- Developed code to be implemented onto an Arduino, providing control of the pod
- Managed and directed a team of engineering students in the assessment and testing of code to be used within the pod

Languages, Technologies, and Skills

- Python, Java, C++, HTML, Go, Ruby, Ruby on Rails, JavaScript, React, MySQL, CSS
- Git, Github, Docker, Kubernetes, Flask, CI/CD, Jira
- Machine Learning, Data Mining, Agile Development

Relevant Coursework

- Algorithms	- Intro to AI & Machine Learning	- Software Design
- Data Mining	- Software Engr Languages and Tools	- Data Structures