KARTHIK DEVARAKONDA

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Links: GitHub, LinkedIn

SKILLS

Languages: C, Python, Java, Typescript, JavaScript, HTML, CSS, SQL, R, MatLab, Bash

Development Frameworks: Angular, React, Vue, .NET

Testing Framework: Jest, JUnit

Architectural Frameworks: Integration Testing, Unit Testing

Business Frameworks: Agile: Scrum and SaFe

Tools: Azure (AKS, Devops, appservice, portal, Azure VM, Git/Github)

EXPERIENCE

January 2021-Present

Software Developer, **CUNA Mutual Group**

- Responsibilities:
  - Part of an agile team of 5 modernizing Legal and Compliance policy monitoring solutions, and Human Resources On-boarding and Payroll solutions
  - Solutions were VB.NET monolithic systems to be evolved in .NET core and Vue
  - Peer reviewing requests, creating clean refactored platform
  - Part of architectural agile team (team of 4) tasked with infrastructure modernization using Azure Kubernetes Services (AKS), Docker, Powershell (for windows deployments) and Python (for Linux deployments)
  - Working with Lead Architect (co-manager) to re-create infrastructure to microservice architecturee
- Deliverables:
  - App Modernization Enablement Team:
    - Clean, refactored and functional solution in .NET core using service based architecture and SOLID principles
    - Locally dockerized application with dockerized database in MSql
    - Modernized application using RESTful API's and configuration based programming
    - Assisting with Vue front end modernization effort
    - 2 Solutions total, 4 Systems
  - Architecture Team:
    - Based on diagrams and guardrails established by Lead Architect, created docker images and AKS configurations
    - Creating powershell scripts for AzDO to leverage infrastructure (Resource management and creation) as well for evolving current deployment
    - Spearheading Architectural effort with Lead Architect to bring Ubuntu to the company
    - Creating python script to support new deployment and POC with Architectural team

August 2021-Present

Lab Research Assistant, ***UW-Madison Department of Neurosciences***

- Was brought in to create more efficient means of predicting and filtering data
    - Previously mathematical models were evaluated by hand and all data predictions were calculated regardless of relevance
- Based on thousands of previous data points and basic linear algebra, a set of differential equations were created in MatLab to properly predict the relationships in the data
    - Particularly the relationship between the angle displacement of an inner ear hair-cell due to stimuli, the electrical voltage that is created based on this hair movement, and the amount of current that is sent to the brain via neurons to alert it of the stimulus
- Utilized the R programming language to filter and further analyze the data provided to us by these models
    - This included basic calculations such as finding the mean of a dataset along with more advanced calculations such as running t-tests and other tests for statistical significance based on what the lead researches needed at that time

January 2020 -December 2020

Software Development Intern, **TASC Inc.**

- Built and maintained the company's web-applications using configuration driven development
    - Utilized Angular and Node to build out these applications
- Gained in-depth knowledge of the Scrum Agile framework through intensive collaboration with Scrum team
    - Strengthened teamwork and communication skills, both written and oral, as a result of working in a highly collaborative environment
- Developed Unit Tests and Integration Tests using the Jest testing framework
- Worked heavily with and became very comfortable using Version Control Software

August 2019 - December 2019

Lab Research Assistant, ***UW-Madison Department of Neurosciences***

- Conducted experiments to determine if environmental factors could invoke mental illnesses such as Schizophrenia
    - Simultaneously determined where in the DNA these illnesses were arising from
- Received large mRNA data inputs and worked with Senior Researchers to sequence the mRNA
    - mRNA sequencing involves splitting the mRNA and then mapping different sections to different parts of the genome
        - The process is used to understand which part of the mRNA codes for proteins involved in a specific genomic process or lack thereof
- Utilized the R programming Language to filter down the data into what we deemed was relevant and to run further tests on our results to determine statistical significance
    - It was also used to visualize the data in various ways

December 2019 - December 2020 Senior House Manager, ***Theta Delta Chi – Sigma Deuteron Charge*** *(Social Fraternity)*

- Handled lease and rent information for 35 residents
- Increased property revenue by over $16,000 while cutting yearly costs by $1,200
- Effectively utilized a $47,000 fraternity budget along with 9 other executive board members
    - Maintained a surplus without compromising on the quality or quantity of fraternity events or house maintenance
- Acted as an intermediate between alumni and 90 active fraternity members

EDUCATION

University of Wisconsin – Madison, *Madison, WI*

Bachelor of Science in **Computer Science** and **Neurobiology**

Dean's List Honoree

Relevant Coursework: Java Programming, Assembly Language (LC-3), Web Development, Machine Organization, Discrete Mathematics, Artificial Intelligence, Organic Chemistry, Physics, Calculus 1-3, Linear Algebra, Optimization, Mobile Systems Development, Applied Statistics, Mobile Development, Database Management, Virtual Reality