Sushrut Ghosal

+1 480-207-9500 | sghosal@asu.edu | https://www.linkedin.com/in/sushrut-ghosal

SUMMARY

Computer Science Senior, actively seeking a full-time position after Graduating in May 2024 as a Software Developer Engineer.

EDUCATION

M.S. Computer Science Expected May 2025
Arizona State University, Tempe, AZ

B.S. Computer Science Expected May 2024
Arizona State University, Tempe, AZ 4.00/4.00 GPA
Grand Challenge Scholars Program

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, C#, Prolog, Scheme, SQL, MATLAB, Swift.
Tools and Applications: Eclipse, Visual Studio Code, Google Colab, XCode, SharePoint, Excel, PowerBI, JIRA.
Libraries: NumPy, Seaborn, Pandas, Matplotlib, OpenCV, CV2.
Relevant Courses: Data Structures and Algorithms, Theoretical Computer Science, Principles of Programming Language, Operating Systems, Intro to AI, Foundations of Machine Learning, Computer and Network Forensics, Linear Algebra, Discrete Mathematics, Probability, and Statistics.

WORK EXPERIENCE

Intel Corporation
Undergraduate Intern Technical May 2023 - present

- **Collaborated** in the development and enhancement of **Chatbot** in **C#**, utilizing the **Microsoft Bot Emulator,** and integrating it into **Microsoft Teams**. This collaborative effort played a key role in elevating the Design Enablement team's productivity by enabling instant, accurate employee responses.
- Enhanced chatbot capabilities to autonomously fetch technology owners' details, generate meeting minutes, and perform document-based queries and comparisons, and added the capability to file training requests to SharePoint and JIRA.
- Conducted **data analysis** utilizing **SQL**, extracting critical insights from **Elastic Search**, **MongoDB**, and **Intel DaaS** to inform the chatbot's development.
- Currently leading the integration of Technology Documents into the chatbot, employing **RAG (Retrieve and Generate)** methodology and **Large Language Models** to enhance document-related query responses.

Sun Devil Athletics
Project Title: Athlete App Management System Fall 2022 – May 2023

- Developed an **iOS app** for the Sun Devil Women's Volleyball Team in Swift. This shows the Athlete's performance and health statistics over time and **predicts** game performance and injury, based on the existing data.
- Used **Core Data** as a database to store the player's biomedical and match statistics data. Extracted data from various cloud sources, transformed it for the needs of the app, and then loaded it into the database for performing analysis.
- **Streamlined and optimized** the entire process and presented **key performance indicators** for each player, along with a **progress report**, and presented in a dashboard.

Undergraduate Student Researcher
Project Title: Neuro Symbolic AI for Agriculture Data Spring 2022 – Fall 2022

- Researched an AI research project to understand the underlying reasons for the machine learning algorithm predictions focused on **Object Detection in Precision Agriculture**.
- I used the **Apriori algorithm** for itemset mining and determining the key components of the data that were affecting the YOLOv5 model using Python.
- I analyzed the reasons why the model was performing poorly and then removed those factors to get a higher **mean Average Precision**.

PROGRAMMING PROJECTS

Operator Precedence Parser, C++

- Built an operator precedence parser using the **stack data structure**.
- The program takes in a simple program based on a specific Grammar rule as an input and computes an **Arbitrary Syntax, (Binary) Tree** for each line of code.
- It checks for any syntax and semantics errors in the provided input code and prints the position of errors.

Number Recognition Calculator, Python

- Built a **Python** application that uses the device camera to detect handwritten symbols including numbers, and basic mathematical symbols, and then solve the mathematical equation.
- Used **OpenCV** to access the device camera and take a handwritten equation picture by pressing the spacebar key. Used **Pytesseract** to detect handwritten symbols.

Hash Table for Library, C++

- A program that creates a **hash table** with chaining, using a size that a user enters to store publication information of books.
- Uses an array of **linked lists** to store the value and a **hashing algorithm** using the book's ISBN number to store them in the hash table.

Online Shopping Application, JAVA

- An online shopping application using **MySQL database system**.
- The **GUI** program allowed customers to select and purchase items from the inventory, Employees to update items in the inventory, as well as facilities available to a customer, and Managers could access everything including updating customers, and employees on the database.

Wavefront Path Finder Algorithm, C++

- The program helps translate a given 2D array environment with obstacles into a navigable space using the shortest distance from any given start and end point the user gives.
- It uses a **Wavefront algorithm** and a naive Greedy Algorithm to reach from start to ending point.

MISCELLANEOUS

- I won the first prize at the **WICS Hackathon** at Arizona State University with over 50 participants in Spring 2022.
- **Dean's List** for all **seven consecutive semesters**: Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023.
- Worked on Engineering Projects in Community Service **ARORA research project for NAU research CANIS lab** to prevent HOPI tribe youth from committing suicide. I designed wireframes in Figma for the mobile application.
- LinkedIn License in **Artificial Intelligence Foundation: Neural Networks**, and **Learning Data Science: Tell Stories With Data**.