Nithisha Sathishkumar

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TECHNICAL SKILLS

Programming languages: Python, C++, Java, Swift
Artificial Intelligence: Machine learning, computer vision, linear and multiple regression

Tools and Framework: Visual Studio Code, Eclipse, Docker, Git, Test Driven Development, Microsoft Office, Bash, Tableau, Azure, Keil Version
Web-Technologies: HTML, JavaScript, CSS, YAML, Lucid Chart, Figma, Node.js, Bootstrap, React, Go, TypeScript
Database*: SQL, PostgreSQL, MySQL
Operating System: Linux, Window, macOS, iOS
Soft Skills: Strong Communication, Collaborative Teamwork, Analytical and Problem-solving, Leadership
Language: English, Hindi, Tamil

EDUCATION

- **Bachelor of Science in Computer Science & Software Engineering**   **GPA: 3.8**   **Sept 2022 – Mar 2025**
  University of Washington Bothell

  Key Elective: Agile Software Engineering, **C++** and **Java** Data Structures & Algorithms, Operating System (Linux, Window), Database System, Web Development, Technical writing, UX Design and practice, Linear algebra, and statistics

ACADEMIC PROJECTS

SignTalk (Skills: Swift, CoreML, TensorFlow/PyTorch, OpenCV, AI/ML Algorithms, UI/UX Design, Research, UIKit, Cocoa)
- Developed an app to bridge communication gaps for deaf individuals using **AI/ML** to recognize sign language gestures via a mobile camera, converting them to text and audio in real time
- Enhanced ASL gesture recognition accuracy by optimizing the TensorFlow model, leading to a 55% improvement in recognition accuracy
- Includes interactive lessons and practice modes for ASL, with progress tracking and accessible UI options like high contrast and voice commands.
- Experience with software testing and version control and software programming language

MentorMe Tutoring Platform (Skills: JavaScript, HTML, CSS, Firebase, Zoom API, PayPal API, React, Bootstrap, Go, Square, Google API, LibreTranslate)
- Developed web-based platform to connect users with tutors, allowing for goal-based learning in tech and academic subjects
- Integrated Zoom and PayPal APIs for seamless virtual sessions and payment processing, enhancing user experience and platform accessibility.
- Utilized Firebase for secure user authentication and real-time database management, supporting personalized user profiles and learning progress tracking

Weather Application (Skills: JavaScript, HTML, CSS)
- Built a website that allows users to search weather for multiple locations with options like dark mode
- Integrated **OpenWeather API**, providing real-time weather updates for 100+ locations

Hotel Reservation (Skills: Visual Studio, PostgreSQL, Java, SQL)
- Designed a database on **PostgreSQL** to store 50+ customer and employee data, ensuring high performance through optimized queries and functional dependencies.
- Conducted data modeling using the **Erwin tool** and collaborated with a team of 3 to enhance the database reliability and code quality, improving query speed by 20%

Dijkstra's Shortest Path Algorithm (Skills: C++, Data Structures and Algorithms)
- Implemented graph classes to read graph information, storing it in an adjacency list and matrix, and implemented **Dijkstra's algorithm** to find shortest paths.
- Achieved a 30% efficiency boost in graph processing for complex datasets, emphasizing clean and maintainable code aligned with SOLID principles

WORK EXPERIENCE

Student leader (Peer coach)   **Mar 2024 – current**
- Facilitated the transition for incoming **40** first-year students pursuing computer science, business and pre-med fields facilitating a smooth adaptation to university life.
- Conducted over 90% of one-on-one coaching sessions, assisting students with goal setting, academic achievement, and personal challenges, such as financial or family conflicts, by directing them with appropriate campus resources
- Organized and executed engaging activities for foster communication, involvement, and student engagement
- Collaborated with a team of six to deliver presentations to **150+** first-year students, providing guidance on exploring and learning about their chosen majors

CS Teaching Assistant   **Mar 2022 – Jun 2023**
- Collaborated with 4 CS professionals and supported CS programs for kids, developing lesson plans and implementing programming lessons for **Java** and **C++** basics, including data structures, control flow, and debugging techniques
- Improved engagement and understanding among 35+ students, ages 10-18, through tailored one-on-one tutoring, lesson plans, and lectures
- Leveraged **Google Classroom** and **Slack** to enhance collaboration and streamline communication between teachers and students

ACCOMPLISHMENTS

Dean's List Awards   **Sep '22 - Current**