

Rohith Vishwajith

Contact Information

Website: www.rohithv.me

Phone: [1 408 442 7911](tel:14084427911)

Github: github.com/rvishwajith

Email: rohithv@utexas.edu

Linkedin: linkedin.com/in/rvishwajith

Education

University of Texas at Austin

Austin, TX | 08/2021 - 05/2025

Computer Science B.S. & Robotics Minor (Expected Graduation: 05/2025)

- Coursework: Data Structures & Algorithms, Computer Architecture & Organization, Artificial Intelligence Design, Discrete Math, Matrix Calculations, Statistics, Computer Science Research
- Organizations: UT CS Research Program, Electronic Game Developer Society (eGADS)

West Valley & Mission College

Los Altos Hills, CA | 05/2020 - 07/2021

- Coursework: Advanced Java, C++ Methodologies, Intro Python, Networking, Linear Algebra, Multivariable Calculus

Experience

UTCS Research Building Fast Multiplayer Networking

C# NET, Javascript | github.com/rvishwajith/cs370-research

- Built a 2-way 64-tick UDP server in C# with <15 ms latency and <0.5% packet loss across networks.
- Implemented TCP sockets with sub-70 ms of latency and 0% packet loss, allowing for real-time voice and text chat.
- Used certificates to support HTTPs connections, allowing authentication and real-time data relay from webpages.
- Used concurrent maps to poll on all ports, allowing servers to simulate and relay PhysX data for 100+ clients in a single scene.
- Built email (SMTP) based 2FA using the NET Mail API to improve account security and prevent spam accounts.

Projects

Descent Underwater Exploration Game with AI Ecosystems

Unity, C#, HLSL | github.com/rvishwajith/descent

- Built an AI system with real-time clustering, seeking, & avoidance to simulate fish schools based on the Boids algorithm.
- Designed a custom-built octree allocation system to improve efficiency of AI flocking from $O(N^2)$ to $O(N \log_3 N^2)$.
- Utilized static mesh instancing & vertex shading to batch & animate all repeating meshes in 1 draw call (draw call reduction of up to ~99.9%, rendering speed increases of 20% - 500%).
- Created a spline-based vertex deformation algorithm for dynamic animation of all large creatures.
- Implemented a custom tilt-based input system for mobile devices using the gyroscope.

Birdbrain Trained Sentiment Analysis on Tweets

Python, Pytorch, NLP | github.com/rvishwajith/birdbrain

- Used Pandas and NumPy to validate and pre-process a large dataset of tweets and sentiment data for NLP model training.
- Trained a PyTorch language processing model to conduct sentiment analysis on large datasets of tweets for a given hashtag.

Skills

Programming Languages

- C# (Unity, .NET), Java / Kotlin, Python, Swift, Javascript, HTML & CSS, C / C++, Dart
- HLSL/GLSL (including Unity Shader Graph), Metal (MetalKit / SceneKit)

Tools & Libraries

- Web / App Development: React / React Native, SwiftUI / UIKit, Bootstrap, Xcode, Android Studio, QT, Docker
- Game Engines / Graphics: Unity, Three.js / Babylon, Unreal, ARKit / SceneKit / RealityKit / MetalKit
- Networking / Databases: AWS (Amplify/Lambda), MongoDB, Firebase, Socket Servers, JSON + REST
- UI Design / 3D Modeling: Blender, AutoCAD, Figma, Sketch
- Machine Learning / Data Analysis: PyTorch / NLTK, Tensorflow, Pandas / NumPy, Google Cloud Vision API
- General Skills: GitHub, SDLC, Word, Excel, PowerPoint, Bash / Shell, macOS / Linux / Windows

Leadership

Kids Love Coding Lead Java Tutor & Website Developer

Cupertino, CA | 08/2019 - 05/2021

- Collaboratively developed an introductory/intermediate Java curriculum for students aged 10 - 14.
- Designed a responsive website & built an HTML/CSS template for team members to add site pages.