Nishit Jain

+353 892024207 | nijain@tcd.ie | linkedin.com/in/itsnishitjain | github.com/itsnishitjain

EDUCATION

Trinity College Dublin Dublin, IE
Bachelor of Arts in Computer Science, First Honors *Sep 2023 – May 2027*

EXPERIENCE

Software Developer Dec 2024 – Jan 2025
ToDesktop (YC W20) *Remote*
- Worked on a contract to implement a secure desktop app updater prototype using Electron and Node.js
- Addressed vulnerabilities in Electron-Updater (CVE-2021-43813) for automatic updates in Electron applications
- Integrated cryptographic signature verification using Minisign to ensure authenticity and integrity of updates.

Perception Team Sep 2024 – Present
Formula Trinity *Dublin, IE*
- Responsible for ensuring accurate and fast perception in high-speed racing using camera and LiDAR sensors
- Using deep learning and computer vision to handle noise reduction and cone clustering in sensor data
- Using tools like ROS, Gazebo, and RViz for simulation and data visualization

PROJECTS

Landstat Tracker | *Google Earth Engine, MongoDB, Express.js, React, Node.js* Sep 2024 – Oct 2024
- Developed a tool to analyze Landsat imagery for NDVI (Normalized Difference Vegetation Index)
- Implemented GitHub OAuth to get data from user's repositories
- Integrated Google Earth Engine for visualizing cloud coverage percentage and environmental data
- Built RESTful APIs to fetch Landsat imagery, process overpass predictions
- Created responsive frontend using React and Tailwind CSS with Authentication using Express.js and MongoDB

Memorease | *React Native, Expo, Gemini API, Firebase, Google Maps API* Aug 2024 – Sep 2024
- Created an app for people with early-onset dementia, Alzheimer's, or memory challenges
- Created features like location tracking, timely reminders, text-to-speech, and language control for journaling
- Created a caretaker-patient admin system for monitoring patient activity in real-time
- Went to several Alzheimer-Dementia centers with real feedback from patients and trained psychologists

VST Guitar Plugin | *JUCE, Google MediaPipe, C++* May 2024 – Aug 2024
- Created a guitar plugin compatible with DAWs that allows players to update their tone on a 2d graph
- PImplemented custom distortion and reverb using feedback delay loop with volume and blend parameters
- Created a feature where X-Y coordinates determine the blend of distortion and reverb on the graph
- Used Google Mediapipe to calculate the hand gestures for changing guitar tones

AWARDS

Global Nominees - 2nd Place (National) in Nasa Space Apps Challenge - Athlone
2022 B High Achiever in Rockschool Electric Guitar Grade 7 for getting the highest score in North India

RELEVANT COURSEWORK

Computer Science: Data Structures and Algorithms, Object Oriented Programming, Software Engineering Project, Concurrent Systems and Operating Systems (C), Microprocessor Systems (ARM Assembly)
Mathematics: Discrete Math, Statistical Analysis, Applied Probability, Linear Algebra, Calculus

TECHNICAL SKILLS

Languages: C/C++, Java, Python, SQL (Postgres), JavaScript, HTML/CSS, ARM Assembly, R
Frameworks: React, React Native, Node.js, Electron, SpringBoot, ROS, JUCE, Express
Developer Tools: Git, Docker, Google Cloud Platform, Firebase, MongoDB, VS Code
Libraries: pandas, NumPy, Matplotlib