Anant Matta

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Education

University of Illinois Urbana-Champaign August 2022 – May 2025
Bachelor of Science in Computer Science and Mathematics *Champaign, IL*
GPA:4.00
Deans List, James Honors Scholar
Relevant Coursework: Data Structures, Software Design Lab, Discrete Structures, Computer Systems (IP), Introduction to Algorithms and models of Composition (IP), Mobile Robotics for CS (IP), Graph Theory (IP)

Experience

Research Assistant January 2023 – Present
Wireless, Sensing, & Embedded Networked Systems (iSENS) Lab *Champaign, IL*

- Collaborated with T-Mobile to process FMCW radar data for low latency detection of MM-wave Retro-reflective tags
- Designed a mixed Reality system for real-time visualization of WLAN networks and packet transfer
- Developed an augmented reality platform using neural networks for real time ray tracing of wave propagation from access points

Electronics Projects Lead August 2022 – March 2023
Illini Motorsports FSAE *Champaign, IL*

- Managed a small team to engineer a low-power STM-32 based embedded system to integrate analog signals onto a preexisting CAN bus
- Contributed to designing of a lightweight, reliable intracommunication system for sensing and compute systems of 2023 race car

Research Assistant September 2018 – June 2022
Waksman Institute of Microbiology *New Brunswick, NJ*

- Isolated and sequenced cDNA of Landoltia Punctata plant for genetically modified biofuel development
- Used FinchTV to process nucleotide sequence and BLAST to identify similarities in NCBI database
- Identified protein similarities in PDB database and refined protein models of sequence using Jmol
- Coordinated bioinformatics research program between Rutgers University and local program, supervising 60+ participants of Waksman Student Scholars Program

Projects

Millimetro | *Python, Matlab, C* January 2023 – Present

- Created python analog of Matlab radar FFT processor used in original research paper
- Optimized range doppler processing for detection of mm-Wave tags at high velocity
- Redesigned millimetro tag for higher reliability in dynamic environments

XRVision | *Python, A-Frame, ARENA* May 2023 – Present

- Developed a MiXed Reality platform for WLAN and EM-radiation visualization using A-Frame
- Used PyTorch for ray-tracing of access point signal propagation
- Implemented WLAN network visualization in MiXed reality using ARENA

iPlanner | *React, Typescript, Springboot, Java, MongoDB* January 2023 – May 2023

- Designed a full stack web application using Springboot for the backend and React for the frontend
- Created database of current offered courses using GitHub repository using MongoDB
- Used Bootstrap and Sortable to create graphical user interface

Technical Skills

Languages: Python, C++, Java, C, Typescript/Javascript, HTML/CSS, Matlab
Frameworks: React, Node.js, A-Frame, Spring Boot, ARENA, Matlab
Developer Tools: Git, GitHub, Docker, MongoDB, Visual Studio
Libraries: Scikit-learn, SciPy, TensorFlow, PyTorch, Pandas, NumPy