Dheemanth Sai Majji

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https://dmajji.github.io/Dheemanth-Majji-Portfolio/ — https://github.com/Dmajji

Education

Vanderbilt University School of Engineering **Expected Graduation: May 2026**
Major: *Bachelor of Science in Computer Science ,Applied Mathematics* *Nashville, TN*
Relevant Coursework: *Data Structures and Algorithms, Intermediate Software Design, Operating Systems*

Experience

Leidos **May 2024 – Aug 2024**
Software Engineer Intern — JavaScript, Python, Apache Server, Red Hat API, HTML / CSS *Remote*

- Transformed a static **250+ record HTML file** into a dynamic **JavaScript** interface, improving usability and enabling faster data access for internal teams.
- Integrated **Apache HTTP** server with **Red Hat API** using **JSON** to optimize and centralize data operations, enhancing accessibility for **7,500+ users** across the company.
- Accelerated vendor management by **40%** with advanced **JavaScript** filtering, search, and date time functions.
- Acquired INTERIM SECURITY LEVEL CLEARANCE

M.H.G.H Vanderbilt Lab **Sept 2023 – Present**
Software Engineering Intern — Python, Pandas, MatPlotLib, RedCap API, Seaborn *Nashville, TN*

- Analyzed testing data from New York and Chicago sites using **Python**, **RedCap API**, and **Matplotlib**, uncovering a **5.6% higher false positive rate** at the New York site.
- Utilized **Pandas** library to process and clean over **50,000 data points** of user test information, filtering out **17.27% of outliers** and false positives/negatives, and improving data processing **efficiency by 0.46%**.
- **Co-authored research manuscript** with support from Northwestern, Columbia Nursing, Feinberg Medicine, and Chicago Pediatrics.

Medical-image Analysis and Statistical Interpretation (MASI) Lab **Feb 2024 – May 2024**
Science Communication Analyst *Nashville, TN*

- Orchestrated the translation and dissemination of scientific research publications into accessible narratives.
- Regularly audited PubMed for lab publications, ensuring **100% database accuracy** by uploading an **average of 10+** missing monthly entries to maintain research integrity.

Projects

Deep Learning Soccer Analysis System | *Python, OpenCV, Yolov8, Kaggle* **Jun 2024 - Present**

- Developed and implemented an AI-driven soccer analysis system utilizing **Yolov8** for real-time detection of players, referees, and soccer balls, achieving a **detection accuracy of 95%** and **processing speed of 30FPS**
- Utilized Kaggle to manage and train **CNN models**, incorporating **KMeans clustering** and OpenCV for team identification and player tracking.
- Employed optical flow and perspective transformation to calculate player movement metrics, achieving **less than 5% testing loss**.

Blockchain Analytics and Persistence Engine | *C++, CMake, GoogleTesting* **Feb 2024 - Mar 2024**

- Enhanced a blockchain database in C++ with data persistence using **Visitor**, **Factory** and **Build** patterns.
- Facilitated transactions and user activity using **Debug, Ledger,** and **Whale** patterns for improved database analytics.
- Enabled multi-format data storage, including custom **JSON format**, for versatile and compatible data management

Login Testing Window Tracker | *Pandas, Python, RedCap API, Seaborn* **Jan 2024 - May 2024**

- Leveraged Python and Pandas to process and clean over **50,000 health records** from RedCap API, boosting data accuracy and removing non-essential admin activities.
- Utilized Seaborn for visual analytics, showcasing a **15% increase in user engagement** during pivotal testing windows, influencing clinical trial strategies.

Technical Skills

Languages: Python, C++, C, Java, JavaScript, noSQL, SQL
Developer Tools: AWS, Git, Agile / Scrum methodology, API and Server Integration, Linux Shell, Unit Testing
Technologies/Frameworks: Node.JS, React, Python Sci-Kit, Flask, NodeJS, Pandas, NumPy, MatPlotLib, Seaborn

Club Affiliation

Vanderbilt Lakshya Bollywood Dance - Financial Chair, Vanderbilt South Asian Cultural Exchange, Project Rishi, VINES, Member, Vanderbilt Blockchain