

Thushan Ranasinghe

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EDUCATION

University of Maryland College Park

Bachelor of Science in Computer Science, Minor in Statistics | GPA: 3.64

College Park, MD

Aug. 2023 – Dec 2026

EXPERIENCE

Software Engineer Intern

June 2025 – Aug 2025

Collins Aerospace (RTX)

Annapolis, MD

- Developing a machine learning model to detect flight traffic anomalies using Isolation Forests, KMeans, and Neural Networks
- Processing, manipulating, and feature engineering large datasets for the anomaly detection task

Undergraduate Research Assistant

Aug 2024 – Dec 2024

UMD CS Department

College Park, MD

- Optimized the process of generating 100+ visualization items for multiple choice questions, improving efficiency by 3% using OpenAI/Claude models
- Developed Python scripts that automated item generation, reducing manual input by 50% and saving 5+ hours per week
- Designed a multi-pipeline workflow that generated and displayed 200+ PDFs and visualizations which reduced time-to-delivery by 30%

Dev Ops Intern

May 2024 – Aug 2024

Radian

Bethesda, MD

- Developed 5+ production-ready Jenkinsfiles for AWS pipelines, improving CI/CD efficiency and deployment speed by 25%
- Migrated Kubernetes config file code to new standards, reducing codebase by 1,000+ lines and simplifying maintenance
- Configured Jenkins pipelines to integrate with AWS services (EC2, S3, EventBridge), streamlining operations and reducing integration errors by 30%

Software Engineer Intern

June 2022 – Aug 2023

National Cancer Institute

Frederick, MD

- Developed filtering and searching mechanisms for 10,000+ scientific compounds using Ajax and back-end database
- Implemented server and client-side validation with PHP and SQL queries, preventing unauthorized data access
- Developed 1000+ Excel Spreadsheets using the PhpSpreadSheet Library for enhanced data visualization

PROJECTS

MindMapify (Bitcamp Hackathon) | *Python, Node.js, React, Bootstrap, DeepSeek API, Gemini API*

- Integrated DeepSeek and Gemini APIs to build a dynamic AI-powered chatbot that delivers personalized study assistance and information
- Developed a PDF extraction tool to convert uploaded files into summarized flashcards using the GeminiAPI

VSCOify | *JavaScript, HTML/CSS, Jest, Git*

- Developed and published a Chrome extension that allows users to scrape VSCO posts
- Implemented a feature allowing users to download images with custom scraped URLs through the Fetch API
- Wrote extensive JS unit testing and simulated Chrome API requests with the Jest framework

OCaml Interpreter | *OCaml, Dune*

- Designed and implemented a lexical analyzer and parser based on the LL(k) Recursive Descent Parser architecture
- Constructed and optimized Abstract Syntax Trees (ASTs) to represent tokenized inputs for expression evaluation

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript, OCaml, PHP, SQL, Rust, Matlab, HTML/CSS

Technologies and Frameworks: Flask, React, Pandas, Matplotlib, Node.js, MongoDB, Jira, PostgreSQL, Linux

Developer Tools: Git, Jenkins, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse