

Tharanitharan Muthuthirumaran

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EDUCATION

NORTHEASTERN UNIVERSITY

MS in Computer Science

Coursework: Algorithms and Programming Design Paradigm

Expected Jan 2026

GPA: 3.8 /4

ANNA UNIVERSITY

B.E in Electrical and Electronics Engineering

Coursework: Data Structures and Algorithms, Object Oriented Programming, Design Patterns and Networking

Jul 2017 - Apr 2021

CGPA: 7.7/10

TECHNICAL SKILLS

Programming Languages: Python, Java, C/C++, R

Machine Learning Libraries: Numpy, Pandas, Matplotlib, Scikit-Learn, Seaborn, Keras, Tensorflow, Pytorch

Databases: MySQL, MongoDB

Tools: Tableau, Spreadsheets, Git, Jenkins, Jira, Postman, Selenium

Certifications & Training: Data Analytics Professional Certificate (Google), Data Science Professional Certificate (IBM)
Google IT Automation with Python, Meta Front End Developer

Web Application Technologies: HTML, CSS, JavaScript, React, Flask

WORK EXPERIENCE

ACCENTURE INDIA PRIVATE SOLUTIONS

Chennai, India

Software Test Engineer

Oct 2021 – Dec 2023

- Executed 500+ manual and automated test cases using Selenium, achieving a 95% test coverage for critical functionalities.
- Identified and reported 100+ defects in JIRA during the regression testing phase, enhancing software quality and user experience by reducing post-release issues by 30%.
- Utilized Python programming and Jenkins for automation, developing test scripts and continuous integration pipelines, resulting in a 78% reduction in process time and streamlined testing procedures.
- Collaborated with cross-functional teams, contributing to the successful delivery of high-quality software products within tight deadlines.

PROJECTS

NON-INVASIVE BLOOD GLUCOSE DETERMINATION USING NIR

- Designed hardware circuitry for a non-invasive glucometer, integrating an advanced IR sensor with Raspberry Pi components, resulting in a 30% increase in device efficiency.
- Applied linear regression algorithms to correlate IR light intensity with blood glucose levels, achieving 95% prediction accuracy through rigorous testing and validation.

THIRD EYE

- Engineered a real-time object recognition system using Raspberry Pi and camera, achieving 95% accuracy in environmental awareness and object classification.
- Optimized system performance by fine-tuning the YOLO v3 model and leveraging hardware acceleration on the Raspberry Pi, resulting in a 25% increase in processing speed.
- Integrated Google's Neural Network Text-to-Speech API to convert detected objects into audible descriptions, improving accessibility for visually impaired users.

ACHIEVEMENTS

- Secured runner-up position in Start Summit: Decarbonization the Built Environment; presented a sustainable construction model projected to reduce CO2 emissions by 40%.
- Achieved runner-up position in Roux Hackathon with Maine Quest: a user-friendly tourism platform with AI-driven trip planning and seamless vendor integration.