

KEERTHIRAJAN SENTHILKUMAR

Washington, DC | keerthirajans@gwu.edu | +1 (571) 220-6152

<https://www.linkedin.com/in/keerthirajans58/> | <https://github.com/Keerthirajan58> | <https://k-portfolio.netlify.app/>

EDUCATION

The George Washington University, School of Engineering & Applied Science
Master of Science in Computer Science

Washington, DC
May 2026

- Recipient of Dean's Scholarship Award.
- *Relevant Coursework:* Design and Analysis of Algorithms, Advanced Software Paradigms, Machine Learning and Algorithms, Advanced Cloud Computing, Database Systems II, Computer System Architecture.

Sri Venkateswara College of Engineering
B.E. in Computer Science and Engineering

Chennai, India
May 2023

- *Relevant Coursework:* Data Structures, Natural Language Processing, Artificial Intelligence, Business Intelligence, Advanced User-interface and Technology, Operating Systems, Software Engineering.

TECHNICAL SKILLS

- **Programming Languages:** Python, Kotlin, JavaScript, React.js, C/C++, HTML/CSS.
- **Tools and Technologies:** TensorFlow, Flask, Firebase, MySQL, GIT, AWS, Android Studio, Linux, Django, GraphQL.
- **Other Skills:** Machine Learning and Techniques, Web App Development, API Integration, Relational Database Management, Problem-solving, Microservices.

PROFESSIONAL EXPERIENCE

TCS iON

Chennai, India

Machine Learning Intern

Nov 2021 - Dec 2021

- Engineered an end-to-end ML model for real-time Twitter sentiment analysis, scraping product data to provide actionable insights for critical decision-making. Reduced inference runtime by 40% by incorporating data techniques such as subjectivity and polarity.
- Leveraged Tweepy API for real-time Twitter data integration. Improved model prediction accuracy by 18% using TextBlob over traditional Machine Learning models.

The Sparks Foundation

Remote

Web Development Intern

May 2021 - Jun 2021

- Devised a fully responsive charity donation website integrating payment gateway with seamless transaction workflows and automated email receipts. Recognized for achieving 98%-unit test code coverage for the core logic.
- Utilized modern JavaScript frameworks and Bootstraps to enhance user experience and mobile compatibility.
- Mentored a team of 5+ developers, facilitating pair programming sessions to improve code quality and foster collaboration.

TECHNICAL PROJECTS

Team Lead, Emotion Based Food Recommending App

Sep 2024 - Nov 2024

- Led a team of 5 to develop "Mood Bites," a Kotlin-based Android application that recommends and tracks user meals based on their moods, enhancing mental well-being through data-driven insights.
- Designed and implemented a scalable database with Firebase for efficient storage and real-time management of user meals, mood logs, and order information, including automated email receipts for order confirmations.
- Optimized app performance, reducing load times and enhancing responsiveness to ensure a seamless user experience across devices.

Team Lead, GI Tract Segmentation

Nov 2022 - Mar 2023

- Led a team of 3 developers to build ML model for segmenting Gastro-Intestinal Tract organs from tumors through MRI scans.
- Applied Deep Context Metric Learning for advanced image clustering and processing—improved survival rates by 8% through targeted treatment focused on tumors rather than surrounding organs.
- Optimized backend scalability to handle 38,000 masked 16-bit image datasets, reducing processing time from 5 hours to 2 hours for smoother operation.

Team Lead, Efficient Water Quality Analysis

Apr 2022 - Oct 2022

- Designed an end-to-end model to analyze water quality using multiple factors such as turbidity and hardness.
- Incorporated XGBoost to optimize memory usage and processing speed, resulting in 20% increased model's prediction accuracy.
- Reduced computational load by using hyperparameter tuning and adjusting maximum depth and minimum sample split.
- Deployed the model on IBM Cloud to optimize scalability by 1.5x better than local run.

CERTIFICATIONS

- **AWS Cloud Foundations**, AWS Academy (2025) | **Credential ID:** <https://www.credly.com/go/j3inoS1V>
- **API Designer**, API Academy (2023) | **Credential ID:** 159074801.
- **IBM certified Analysis and Prediction**, ICT Academy (2023) | **Credential ID:** PRADS06EN.
- **Machine Learning**, Stanford University (2022) | **Credential URL:** <https://coursera.org/verify/LBWAGV269YVH>.
- **Programming Foundations**, Duke University (2022) | **Credential URL:** <https://coursera.org/verify/98YLYAJQUXZY>.