Nadimpalli Ujwal Srimanth Varma

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EDUCATION

DAV PUBLIC SCHOOL Hyderabad, Telangana, India
Central Board of Secondary Education *Completed schooling in 2019*

Sri Aakash Junior College Hyderabad,Telangana,India
Telangana State Board *Jun 2019 – Sep 2021*

Amrita Vishwa Vidyapeetham Coimbatore,Tamil Nadu,India
CGPA - 9.12

EXPERIENCE

Software Development Intern **Providence**
Jun 2024 – Aug 2024

- Developed 3 new features across 6 sprints using a tech stack of **Node.js**, **Express**, **React.js**, and **PostgreSQL**.
- Applied **Agile** practices, including sprint planning and daily scrum meetings, to deliver incremental and high-quality solutions.
- Integrated large-scale APIs with efficient **pagination** logic to handle 1,000+ records per call, reducing query load and improving response time.
- Refactored and modularized the codebase, reducing code duplication by **20%** and improving readability and maintainability.

Software Development Intern **Providence**
Jan 2025 – Jun 2025 (Ongoing)

- Developed backend controllers and parsers using **.NET** and **TypeScript** to handle dynamic data processing and service logic.
- Wrote comprehensive unit tests using **Jest** to ensure functionality and prevent regressions across new and existing modules.
- Set up telemetry and monitoring using **Azure Application Insights**, including sending logs, metrics, and custom events.
- Created custom **performance dashboards** using **Kusto Query Language (KQL)** to monitor service usage and diagnose issues.

PROJECTS

Image and Scanned Document Forgery Localization GitHub Demo
Python

- Built a **CNN + ELA** model for image forgery localization, achieving an **F1-score of 0.57**, rivaling **MantraNet** while significantly reducing inference time.
- Achieved **80%+ F1-score** when tampering exceeded 10%, indicating strong **robustness to manipulation intensity**.
- Implemented **YOLOv8** for scanned document forgery detection, reaching **0.92 precision** and **0.48 recall**—effective on **structured formats** like bills and invoices.
- Used **Roboflow** with 8 augmentations for dataset prep; observed potential for improvement with **higher-quality inputs**.

Brain Tumor Prediction GitHub
Python

- **Objective:** Demonstrated that **KNN** achieves **90% faster** processing than **CNNs** and **pre-trained models** like **VGG16** for image classification.
- Performed **multiclass classification** (4 classes incl. **no-tumor**) using **KNN**, **SVM**, **CNN**, and **VGG16**; used **GANs** to upsample minority class from **150 to 600** images.
- Applied **PCA** for dimensionality reduction, reducing **training time by 80–85%**; **hyperparameter tuning** led to accuracy variation of **-5% to +8%**.
- Achieved **90%+ accuracy** with **SVM**, **CNN**, and **VGG16**; **KNN** was fastest, while **SVM** offered a good trade-off between speed and memory.

Recommender Smart Cart
MicroPython,Python

- **Built a smart billing prototype** using Raspberry Pi Pico, RFID scanner/cards, and LED to automate in-store checkout and eliminate queue wait times.
- Implemented the **Apriori algorithm** to generate product recommendations with 90% confidence and a lift of 1.5 for frequent itemsets.
- Delivered real-time recommendations for closely associated products via mobile notifications and on-screen display during cart updates.
- Enabled instant (1–2s) mobile feedback for each item added, improving user engagement and shopping efficiency.

Indian School Dropout rates   [GitHub](#)   [Demo](#)
HTML,CSS,JavaScript,PHP

- **Purpose:** Studied **school dropout patterns** across India by collecting data from **10+ sources** to identify major causes and propose potential solutions.
- Analyzed dropout data and found that **40-50%** of students left school due to **financial difficulties** and **lack of interest**.
- Designed **7–8 relational schemas** using **ER diagrams**, and **normalized** the data to maintain consistency and avoid redundancy.
- Developed a **web-based application** with **interactive visualizations** to present insights and encourage students to continue education up to **Class 10 or Class 12**.

CERTIFICATIONS

Certificate of Completion – Industrial Project Issued By SAP Labs   [GitHub](#)   [Demo](#)
Issue Date: 26-07-2024

Project: Efficient Code Review Automation
Tech Stack: Node.js, React.js, AWS (S3, CodeGuru)

- Developed a web-based system to automate code reviews using AWS CodeGuru, removing the need for manual uploads and pull requests.
- Built back-end middleware to:
  - Accept and upload Java/Python code files to S3 within 5 seconds.
  - Automatically raise pull requests from the uploaded S3 files to CodeGuru for review.
  - Return actionable insights to the frontend, reducing review time by 50%.
- Replaced a 10-minute manual process with a 4–5 minute automated pipeline, enhancing efficiency and consistency for developers.

SKILLS

Languages: Python, C++, Java, JavaScript, TypeScript, HTML, CSS
Web Frameworks: Node.js, Express.js, React.js, .NET
Databases: MySQL, PostgreSQL, MongoDB
APIs and Integration: RESTful APIs, OAuth2, JSON, Postman, Python Requests, API Gateways
Machine Learning and Data Science: Scikit-learn, Pandas, NumPy, TensorFlow, Keras, OpenCV, Matplotlib, Seaborn
Development Tools: Git, GitHub, VS Code, Jupyter Notebook
Testing and Monitoring: Jest, Azure Application Insights
Soft Skills: Collaboration, Teamwork, Leadership

PUBLICATIONS

- *REGION Wise iMAGE Forgery Localisation: A CNN Framework with Error Level Analysis,* presented at the 3rd International Conference in Power Engineering and Intelligent Systems (PEIS 2025), National Institute of Technology Uttarakhand, India (March 08–09, 2025).