

VAMSI UDAYAKUMAR JONNAKUTI

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EDUCATION

New York University, Tandon School of Engineering

NY, USA

Master of Science in Computer Engineering

Expected May 2026

PES University

Bangalore, India

Bachelor of Technology in Computer Science and Engineering

Aug 2015 – May 2019

TECHNICAL SKILLS

- **Languages:** Java, Python, C, C++, JavaScript, Typescript, SQL, HTML/CSS, Vela, Groovy
- **Frameworks:** REST APIs, Spring-boot, Maven, Gradle, Junit, Mockito, Selenium, OpenCV, Tableau, ReactJS
- **Technologies:** Docker, Git, Linux, MongoDB, PostgreSQL, MySQL, Kafka, Postman, Insomnia, Jenkins, Nomad

EXPERIENCE

Target Corporation

Bangalore, India

Senior Engineer

Aug 2022 – Aug 2024

- Pioneered the transition of a low code automation platform to a unified no-code one, designing the Postgres database and Java/Spring microservices, empowering over **500 users** and saving **65,000 man-hours/year**.
- Spearheaded end-to-end creative automation capabilities using **OCR & ML** to extract design components along with relative positions to render package designs on Illustrator using **Java & ActiveX**, with **80% workload reduction**.
- Built a color extraction pipeline that processed artwork files using Machine Learning and automated updates to **SPARK via Kafka-based services**, eliminating **100+ hours/year** of manual work at a rate that is **70% faster**.
- Led the migration from **Nomad to TAP** by revamping CI/CD pipelines, developing a web driver framework, and credential management API, improving system stability and reducing downtime by **40%**.
- Trained and mentored TMs in **Java, Spring Boot, Vela, Docker**, and guided automation projects to strengthen the understanding of the tech stack and agile SDLC.

Engineer

Dec 2019 - Aug 2022

- Developed five robust, scalable bots using **Selenium and Java**, automating key business processes that saved over **\$500,000** annually while reducing manual effort by **2,000 hours** across two distinct business units.
- Revamped a manual intervention capability on the monitoring dashboard using **ReactJS and Redux** on which helps users update data and change the processing state in real-time to reduce failure scenarios by **75%**.
- Built a record and play chrome extension that captures user interactions on websites during manual process execution and automatically generates automation scripts, reducing web-based automation development time by **95%**.

PROJECTS

AGNews LoRA Fine-Tuning | *Python, HuggingFace Transformers, PEFT, LoRA, PyTorch*

[Github Link](#)

- Fine-tuned a pre-trained BERT-based model using Low-Rank Adaptation (LoRA) for efficient text classification on the AGNews dataset using HuggingFace PEFT and Datasets libraries to reduce trainable parameters, speeding up convergence while maintaining accuracy.

Medical Chatbot MLOps | *Docker, Kubernetes, GitHub Actions, ArgoCD, FastAPI, MLFlow*

[Github Link](#)

- Developed an end-to-end MLOps pipeline enabling continuous training and deployment of a transformer-based medical chatbot using Argo Workflows and ArgoCD for automated retraining and redeployment on a Kubernetes cluster provisioned with Terraform and Ansible.

Intelligent Intrusion Detection System | *NumPy, PyTorch, Keras, Python, Tensorflow*

[Github link](#)

- Engineered a 2 stage IDS using a **CNN-LSTM** trained anomaly IDS and **DT** based signature IDS, combined to work as a two-staged filtration system to detect malicious network packets with a **MCC score of 0.84**.

Real-time Sentiment Analysis for CT'17 | *Pentaho, Python, Tweepy*

[Github link](#)

- Implemented a real-time sentiment analysis system that scrapes the twitter data during the match and then uses **NLP and text classification** to perform data science and statistics techniques on **Pentaho**.

License Plate Recognition System | *OpenCV, PIL, Python, Tesseract*

[Github link](#)

- Revamped the LPR system by implementing a hybrid architecture that localized on non-compliant license plates, using **edge detection**, combined with **OCR** to achieve **92% accuracy** in extraction at a 2x faster rate.