

VAMSI UDAYAKUMAR JONNAKUTI

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EDUCATION

New York University, Tandon School of Engineering

Master of Science in Computer Engineering

Brooklyn, NY

Expected May 2026

PES University

Bachelor of Technology in Computer Science and Engineering

Bangalore, India

Aug 2015 – May 2019

- **Courses:** Data Structures, Algorithms, Data Analytics, Computer Networks, Cloud Computing, Operating Systems, Big Data, Network Security, Machine Learning, Data Base Management Systems.

PROFESSIONAL EXPERIENCE

Target Corporation

Senior Engineer

Bangalore, India

Aug 2022 – Aug 2024

- Spearheaded the creative automation capabilities that can read placement parameters using OCR and extract design components using Logo detection and ML to render packaging units on Adobe Illustrator by controlling it through ActiveX and Java, reducing the designers workload by 90%.
- Designed and developed the entire back-end of a DIY automation tool by building Java microservices with Spring Boot, which are capable of translating the scripting language and interacting with the UI and various software applications. This tool saves 65,000 man-hours/year and is actively used by over 500 users.

Engineer

Dec 2019 – Aug 2022

- Automated multiple processes by building five fully scalable and schedulable bots to save \$500,000 and 2,000 hours/year, respectively, for two business pyramids using Selenium and Java.
- Built 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%.

PROJECTS

IoT Intrusion Detection System | NumPy, PyTorch, Keras, Python

[GitHub Link](#)

- Built a two staged Intrusion Detection System (IDS) specific to IoT networks with a CNN-LSTM trained Anomaly based IDS and Signature based IDS powered by Decision Trees to achieve a MCC score of 0.84.

Python Compiler | PLY, Python

[GitHub Link](#)

- Created a Python compiler featuring four stages: lexer, parser, intermediate code generator, and optimizations on the intermediate code generation (ICG) with Abstract Syntax Tree (AST) generation to handle basic code structures.

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

[GitHub Link](#)

- Revamped the ALPR to a hybrid architecture to localize on non-compliant license plates in an image using edge detection and then perform an OCR to extract the license numbers using a model that is trained on different types of altered plates with a 92% accuracy.

PES Uno | HTML, CSS, JavaScript, MySQL, Java, REST API

[GitHub Link](#)

- Launched PES Uno - a website for students to receive updates on the latest events & happenings in college.
- Created it to facilitate login, registration and share features to run a discussion thread in a community channel.

TECHNICAL SKILLS

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

AWARDS & ACCOMPLISHMENTS

- **Target Quarterly Awards:** TII Q2 2022 award winner for the design and development of the DIY automation tool.
- **Target Team Member Incubator:** Successfully tackled the executive challenge in the CodeRed Hackathon, earned a spot in the Target's intrapreneurship program to transform the project into a full-fledged product.