VAMSI UDAYAKUMAR JONNAKUTI

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EDUCATION

New York University, Tandon School of Engineering **Brooklyn, NY**
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*

- **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 **Bangalore, India**
Senior Engineer *Aug 2022 – Aug 2024*

- Designed and developed the entire back-end using Postgres, Java and Spring for a DIY automation tool which is used by over 500 users and saves 65,000 man-hours/year.
- Spearheaded the creative automation capabilities using OCR & ML to extract design components along with its relative positions to render package designs on Illustrator using Java & ActiveX, reducing the workload by 90%.

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.