# Venkata Vamsi Challa

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## **EDUCATION**

## Masters in Computer Science

Jan 2022-Jan 2024

Blekinge Institute of Technology, Sweden

Relevant Coursework:

Machine Learning, Applied Artificial Intelligence, Statistics, Secure Software Engineering, Software Metrics, Programming in UNIX, Software Security

## Masters and Bachelors in Technology, Computer Science and Engineering

JNTUH, Hyderabad, India

June 2018-Jan 2022

Relevant Coursework:

Machine Learning using Python, Artificial Intelligence, Object-Oriented Programming using C++, Programming with Problem Solving using C, Data Structures, Design and Analysis of Algorithms, Database Management Systems, Cloud Computing, , Data Mining, Software Engineering, Web Technologies, Cyber Security, Software Testing, Software Design and Engineering

## EXPERIENCE

#### Research Intern

June 2023-September 2023

Ericsson R&D, Sweden

- Conducted research on "Leveraging Semantic Understanding for Enhanced Image Segmentation" in the field of computer vision.
- Developed an innovative methodology merging pixel-level color differentiation with semantics, resulting in 7.2% improvement in segmentation quality.
- Collaborated with a team, contributing innovative ideas and executing research tasks effectively.
- Presented research findings to showcase enhanced accuracy, precision, and contextual significance of segmentation outputs and presented a new way to automate the process of generating Groundtruth.
- Gained expertise in Python, Semantic Segmentation, Deep learning, Computer Vision, Data Visualization and effective communication through this project.

### Master Thesis Student

Jan 2023-Sepember 2023

Ericsson R&D, Sweden

- Conducted research on "Environment recognition from semantic segmentation of images" in the field of computer vision.
- Developed a methodology which incorporates the semantic information in recognizing the scene, resulting in 97% accurate model.
- Implemented various techniques such as Multitask Learning, Feature Fusion and Graph based Approaches.
- Presented research findings of increased accuracy for scene classification and the importance of Object Semantics in it.
- Gained Expertise in Python, Computer Vision, Deep learning, Machine Learning, Data Visualization, Image Processing.

## PROJECTS

## Environment Recognition from semantic segmentation of point clouds

- Engineered a robust pipeline for accurately identifying environmental attributes in streaming point cloud data via semantic segmentation.
- Employed PointNet architecture to effectively partition point clouds into semantically meaningful segments.
- Leveraged the Open3D library to provide insightful visualizations of the processed data.
- Cultivated expertise in managing intricate point cloud datasets, advanced computer vision techniques, utilizing the Open3D and mastering Data visualization methods.

### Improving Object Label Prediction by leveraging scene context

- Developed a pipeline to improve object identification accuracy in images by considering the contextual classification of the scene.
- Devised a pioneering approach merging scene context with object labels, boosting accuracy by 8.5%, presenting significant enhancements in object recognition.
- Demonstrated the efficacy of context-enriched labeling through precise visualizations and automation techniques.
- This project highlighted my ability to innovate in the realm of computer vision while delivering tangible real-world impact.

## SKILLS

Programming Languages, Techniques and Tools Python, C/C++, JavaScript, Tensorflow,

Keras, OpenCV, Pytorch, HTML5/CSS3, Bootstrap, SQL, ReactJS, NodeJS ,Matlab,

Linux,Git

Soft Skills: Adaptability, Communication, Creative, Team-

work, Problem Solving, Time management.

Languages: English(fluent), Hindi(fluent), Sven-

ska(beginner).

## Achievements and Leadership

- Got Selected for Amazon ML Summer School 2022
- Team Lead for the Top Team Selected from JNTUH SMART INDIA HACKATHON
- Web Domain Core team Lead, GDSC(Google Developer student Club) JNTUHCEH
- Lead Student Coordinator, CODING CLUB JNTUHCEH
- Lead Student Coordinator, CAMPUS RADIO JNTUHCEH

## CERTIFICATIONS

- Machine Learning Specialization (python) Coursera
- Deep Learning Specialization (python) Coursera
- The Complete Web Developer Course 3.0 Udemy