SUJAL VIJAYARAGHAVAN

Research student,
Department of Computer Science and Engineering,
University of South Florida, Tampa

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Summary

A Ph.D. student in the Department of Computer Science and Engineering at the University of South Florida, Tampa, advised by Prof. Sudeep Sarkar. Before that, I worked as a researcher and software developer at Florida Blue, Jacksonville, FL.

Research interests: Computer vision, 3D modelling, unsupervised representation learning

Education

Ph.D.
Since 2021

University of South Florida, Tampa

Computer Science and Engineering · Adviser: Dr Sudeep Sarkar

M.S.
2016–2018

University of North Carolina, Charlotte

Computer Science · Advisers: Dr Andrew Willis, Dr Jing Yang

Bachelor of Engineering
2011–2015

Visvesvaraya Technological University, Belgaum

Computer Science and Engineering · First class with distinction

Industry

Florida Blue
2018–2020

Advanced Software Engineer

Florida Blue · Jacksonville, FL

Worked on researching and prototyping papers relating to natural language and image processing, and developing web and mobile applications demonstrating applicability of prototypes in real time.

- Document digitisation: converting scanned documents into editable files while preserving tabular and spatial structure of the contents (Tesseract, edge detection methods, character detection)
- Keyword mining from conversations
- Insurance claims analysis with classical learning methods

TechJini Inc.
2015–2016

Associate Software Engineer

TechJini · Bangalore, India

Worked as a software developer, developing cross-platform applications for web and mobile with focus on data visualisation and manipulation with D3.js for motion-embedded graphs and charts.

Publications

NeurIPS 2023

STREAMER: Streaming Representation Learning and Event Segmentation in a Hierarchical Manner
Ramy Mounir, Sujal Vijayaraghavan, Sudeep Sarkar

ECCV 2022

LocaliseBot: Multi-view 3D object localisation with differentiable rendering for robot grasping
Sujal Vijayaraghavan, Redwan Alqasemi, Rajiv Dubey, Sudeep Sarkar

Blog articles

Medium 2021

Visualising the loss landscape
Sujal Vijayaraghavan

Projects

Documentation

DDPW: Distributed Data Parallel Wrapper
PyTorch · Distributed compute

A lightweight wrapper that handles scaffolding tasks like creating threads on GPUs/nodes, moving the models and datasets to devices, setting up inter-process communication, etc., and allows the user to focus on the main aspects of modelling and training.

Funding

Participant

DOERS: Distant Observation Enhancement and Recognition System
Intelligence Advanced Research Projects Activity (IARPA)/Kitware · 2021-2025 · $687,752.00

Participant

M3X: Achieving Autonomy by Learning from Sensor-Assisted Control in a Wheelchair-Based Human-Robot Collaborative System
National Science Foundation · 2018-2023 · $576,383.00

Others

Programming: Python, C, C++, JavaScript, Swift

Frameworks: PyTorch, (Tensorflow), D3, etc.

Reviewer: CVPR (2024), RA Letters (2023, 2022), ICVGIP (2023), ACVR (2023)

Sub-reviewer: NeurIPS (2022), ECCV (2022), ACMMM (2022)

29 October 2023