

# Vidhya Sree Narayanappa

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## EDUCATION

### University of Massachusetts - Boston

Boston, MA

Master of Science in Computer Science | GPA 3.8/4.0

Jan. 2023 – Present

**Coursework:** Object-oriented software development, Introduction to Software Engineering, Theory of Computation and Formal Languages, Database Management Systems, Biomedical Image and Signal Processing.

## EXPERIENCE

### University of Massachusetts, Boston

#### Research Assistant

Jul 2023 - Present

- Developing a student-faculty matching algorithm using a modified Gale-Shapley algorithm to streamline mentor-mentee pairing.
- Leading a team of 3 to design a gamified participation tracking system, incorporating virtual rewards to incentivize participation.
- Developed and published custom JavaScript plugins, OSDMeasure and OSDGrid, enhancing real-time image measurement and grid functionality for OpenSeaDragon, an open-source image viewer.
- Designed and implemented a user-interactive website that integrated these plugins, enhancing user engagement by 20%.
- Applied machine learning techniques to develop two classifiers cancer detection classifier to detect cancer and a cancer differentiation classifier to differentiate between real and synthetic mammograms.

#### Teaching Assistant

Jan 2024 - Present

- Guided over 40 students in creating 10+ interactive 3D visualizations using WebGL, Three.js, and XTK in Graphics (CS460).
- Mentored students in Visualising Boston (CS617) using Python, D3.js, and Tableau, with 95% of students achieving project success.
- Facilitated learning in Biomedical Image and Signal Processing (CS666), helping students reconstruct and analyse datasets from medical imaging modalities such as MRI, CT, and ultrasound.

### Target Corporation pvt ltd, India

#### Software Engineer

Aug 2020 - Jan 2023

- Developed APIs and software solutions, reducing workflow completion time by 20% and optimizing system performance.
- Customized the open-source tool Rundeck, where I created advanced, enterprise-specific features that improved organizational workflow efficiency by 25%.
- Led a product development team of 3 engineers, delivering solutions that enhanced user experience across multiple departments.
- Deployed customized Apache airflow software that resulted in a 15% reduction in operational downtime and 10% cost savings on infrastructure maintenance.

## PUBLICATIONS

- VIS 2024 Short Papers | Status: Submitted  
Boostlet.js: Image processing plugins for the web via JavaScript injection
- Springer 2019 | Status: Published  
Apprenticeship Learning Based Load Balancing Technique for Cloud Environment.

## SKILLS

- **Programming languages:** Python, Java, C/C++, JavaScript, Groovy Grails, HTML, CSS.
- **Tools and Technologies:** Apache, Docker, Kubernetes, Git, Linux, Rundeck, IntelliJ, Visual Studio, Jira.
- **Machine Learning Tools and Frameworks:** SpringBoot, Flask, React.js, Node.js, TensorFlow, Keras, Scikit-learn, Pandas.
- **Graphics and Visualisation tools:** XTK, Three.js, D3.js, WebGL, WebGPU, gITF, Tableau, Matplotlib, Plotly.js, Vega-Lite.
- **Soft skills:** Analytical and problem-solving skills, project management, adaptability, interpersonal and communication skills, debugging, unit and functional testing, systems security, monitoring and control, agile methodology, operations and support.