Rakshith G

Machine Learning Engineer — Software Development Engineer

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Professional Summary

Machine Learning Engineer and Full-Stack Developer with 2+ years of experience in AI-driven solutions and web application development. Skilled in developing machine learning models, generative AI frameworks, and enhancing operational efficiency. Successfully led projects at Mercedes-Benz R&D India and Publicis Sapient. Holds Master's in Machine Learning Engineering from NIT Karnataka and a Bachelor's in Computer Science Engineering.

Area of Expertise

Techinal Skills: Machine Learning Engineering Artificial Intelligence, Generative Adversarial Networks (GANs), Deep Learning, Reinforcement Learning, PyTorch, TensorFlow, LLMs and LVMs, Computer Vision, Transformers, Web Development (Full-stack), React.js, JavaScript/TypeScript, Git, Agile Methodology, Test Automation, Selenium WebDriver, Behavior-Driven Development (BDD), Ruby

Professional Skills: Project Management, Leadership, Team Collaboration, Agile Development, Problem Solving, Critical Thinking, Adaptability, Client Interaction, Mentorship, Presentation Skills, Cross-functional Collaboration, Research and Development, Data Analysis, Interpersonal Skills,

Experience

Mercedes-Benz Research and Development India   **7 Months**

Machine Learning Engineer Intern   *Jan 2024 – Present*

- Development of generative AI framework with proprietary tools to create realistic video samples for research projects.
- Implementation of reinforcement learning algorithm for 3D bin packing, enhancing warehouse space utilization.
- Contributing to backend development for optimizing warehouse space allocation and forklift operations.

Skills: Generative AI Development · Generative Adversarial Networks · PyTorch · Tensorflow · Algorithm Development

Publicis Sapient   **1.8 Years**

Software Development Engineer L1   *Jan 2021 – Nov 2021*

- Enhanced Web UI for Automotive Company Improved page speed by 30%, and increased customer retention by 10%.
- Implemented Real-Time Features Introduced online booking for test drives, home delivery, owner services.
- Agile Development and Cross-Skills Achievement: Leveraged Agile methodology and advanced analytics for improved user experience; recognized for participation in the Cross Skills Program and embodying core company values.

Skills: React.js · Cascading Style Sheets (CSS) · JavaScript · HTML5

Quality Engineer L1   *Jun 2020 - Jan 2021*

- Conducted UI web automation testing for a in the Automotive Industry, utilizing the Watir (Ruby) library in Blunder and associating with CICD (Continuous Integration and Continuous Deployment) using Jenkins
- Performed Cross-browser and Responsive devices UI/UX testing using BrowserStack.
- Worked on CMS tool: Adobe Experience Manager (AEM) for authoring and testing purposes.

Skills: Watir · Adobe Experience Manager · UI test automation · BrowserStack · Cross-browser Compatibility · Ruby

Quality Engineering Intern   *Jan 2020 – Jul 2020*

- Developed Selenium WebDriver tests with BDD Cucumber framework.
- Applied various testing methods, including API, security, and performance testing using Karate.
- Collaborated with team using Git for version control and task management.

Skills: Selenium Webdriver · Behavior-Driven Development (BDD) · Karate Framework · BDD Cucumber

Projects

Real-Time Indian Sign Language Classification using LSTM | *Machine Learning*   **Mar 2023**

- Curated 3000 ISL gesture videos using MediaPipe Holistic for "Help me," "Call police," and "Thank you."
- Engineered a preprocessing pipeline, normalizing keypoints and segmenting features.
- Designed a three-layer LSTM model for precise ISL gesture recognition, achieving 92.5% accuracy.

Automated Real-Time Accident Detection System | *Computer Vision*   **In Progress**

- Created a realtime accident detection system with computer vision, YoloV7 Transfer Learning, RAFT for Optical Flow.
- Envisioned to enhance road safety by reducing emergency response times and improving resource allocation.
- Implementing innovative technologies to identify vehicles, pedestrians, and road elements in live video and trigger alerts.

Satellite Image to Maps Translation using pix2pix GAN | *Computer Vision*   **Nov 2022**
- Implemented pix2pix GAN with U-Net generator for satellite image to maps translation.
- Utilized conditional adversarial network follows Image-to-Image Translation with Conditional Adversarial Networks.
- Led innovative image translation with learned mappings, marking a paradigm shift in automation.

Deep Learning for Age Estimation using Facial Images | *ACIT Conference 2020 — IACIT-20-600*   **Jan 2020**
- Employed Deep Convolutional Neural Networks to enhance age and gender prediction, surpasses traditional algorithms.
- Built a TensorFlow Lite model for age prediction, integrated into an Android app to regulate child internet access.
- Published a scientific paper at ACIT 2020 (Paper ID: IACIT-20-600), showcasing project research and contributions.

Responsive Movie Information Website | *JavaScript, CSS, HTML - <u>View Website</u> <u>GitHub Code</u>*   **Dec 2020**
- Designed responsive Movie Information website with Popular and Upcoming movie sections.
- Used Vanilla JavaScript for dynamic UI and smooth animations, improving user experience.
- Integrated front-end with back-end API links for seamless movie detail display.

E-commerce Website Development | *ReactJs JavaScript, CSS, HTML - <u>View Website</u> <u>GitHub Code</u>*   **Sep 2021**
- Developed a End-to-End E-commerce platform using ReactJS Libraries, featuring modern design and animations.
- Enabled on-the-go product management via Sanity and achieved complete Stripe integration for real payments.
- advanced cart, checkout functionalities, and enriched user experience through interactive design.

Education

National Institute of Technology, Karnataka   **Aug. 2022 – Present**
Masters in Machine Learning Engineering   *GPA : 7.6/10.0*

REVA University   **Aug. 2016 – Aug 2020**
Bachelors in Computer Science and Engineering   *GPA : 8.9/10.0*

Leadership/Extracurricular

National Institute of Technology Karnataka   **Spring 2023 – Present**
Placement Coordinator
- Leading career placements, forging strong industry alliances as NITK's Placement Coordinator.
- Strengthened networking prospects by engaging alumni, fostering mentorship to promote impactful talent growth.
- Provided personalized guidance, organized events, and managed databases to boost student support and industry colab.

Internship Coordinator   *Aug 2022 - May 2023*
- Internship Program Lead: Designed and managed transformative industry internships, fostering student growth.
- Guidance & Empowerment: Mentored and supported students for successful internships and career development.
- Administrative Excellence: Orchestrated orientations, evaluations, and database management for seamless internship.

Class Representative — B.Tech — REVA University   *Aug 2016 - Aug 2020*
- Effectively coordinated activities, Championing student interests for an interactive learning journey.
- **Volunteered as an Event Organizer** for Reva Research Conclave (RRC-2018).
- Led as a Team **Captain** for the football team during my B.Tech.
  Skills: Communication · Management · People skill · Interpersonal Skills · Leadership

Achievements/Awards
- Secured All India Rank of **2031** in **GATE 2022** among 120 thousands candidates
- **Winners** of 24-hour **Project Challenge 2019** organized by Xcelerator at REVA University Bangalore Division in 2019
- Runner-Up position in the **Smart India Hackathon Phase-2 Regional Level** Program in 2018.
- **Winners** in a football tournament, representing the college at the Cluster Level Sports Meet in 2019.
- Recognized with an **Innovation and Talent Award** from Publicis Sapient for proposing the best solution idea for the Owner Service problem on behalf of the client in 2021.

Other Interests
- Fitness
- Football
- Dance
- Non-Fiction Books
- Trekking