

Udayapriya Ravikumar

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SUMMARY

Innovative, results-driven Software Engineer with over 4 years of experience in designing and developing applications for banking sector and various industries. Recently completed a Master's in Computational Science from Laurentian University, specializing in AI, Machine Learning, and Deep Learning. Expertise in building machine learning models and image recognition using neural networks and TensorFlow. Currently working on projects in NLP and Image recognition. Proficient in collaborating with cross-functional teams and stakeholders to deliver high-quality solutions within tight deadlines. I am now moving towards roles in AI, ML, or Robotics Engineering to combine my software engineering skills with new technologies and make a positive impact. Able to work independently in remote locations or in office environments as needed by the company.

SKILLS AND TECHNOLOGIES

- **Programming Languages:** Python, Java, C++, C
- **Artificial Intelligence & Machine Learning:** Neural Networks, Image Processing, CNN, Grid World Framework
- **Web Development:** HTML5, CSS3, JavaScript, Shell Scripting, Bootstrap
- **Databases:** MySQL, NoSQL, Vertica, Teradata
- **Frameworks & Tools:** TensorFlow, React, Angular, DataStage, Hadoop PySpark, Pycharm, Jupyter, Eclipse
- **Data Warehousing & ETL:** Hadoop, DataStage, ETL workflows
- **Project Management & Version Control:** Git, Jira, Jenkins, Agile/Scrum, SDLC methodologies.
- **Utilities:** VS Code, MS Office Suite (Word, Excel, PowerPoint, Project), Confluence, Autosys

PROJECTS

CNN Using Transfer Learning (ResNet18) for Real-Time Sign language Classification

Oct 2024

- Developed a CNN model with transfer learning from ResNet18 for real-time image classification using webcam data. Fine-tuned a pre-trained ResNet18 model on ImageNet for a 25-class(alphabets) classification task, achieving 94% accuracy. Utilized PyTorch for model development and optimization, fine-tuning the final layers for improved performance. Deployed the model for real-time classification of sign language alphabets through live webcam input, enhancing accessibility solutions.

LightUp Puzzle Game Development Using Backtracking and AC-3 Algorithm for Puzzle Solving

Nov 2024

- Developed a Python-based interactive LightUp puzzle game with Tkinter GUI. Implemented backtracking and AC-3 algorithms for puzzle solving, ensuring the correct placement of light bulbs on a grid. Incorporated real-time conflict detection and illumination logic for solving and validating puzzles. Created dynamic grid resizing and method selection (Backtracking, AC-3) for a customizable user experience. Implemented advanced algorithms to improve puzzle-solving efficiency and validation accuracy by 30%.

Image Classification of Handwritten Numbers and Animals Using CNN

Nov 2024

- Utilized ReLU and Sigmoid activation functions to improve model performance and accuracy . Achieved 96% accuracy in predicting test data using well-established deep learning techniques. Implemented data preprocessing and augmentation to handle variations in the dataset from Kaggle, improving the model's robustness.

PROFESSIONAL WORK EXPERIENCE

Technology Analyst, Infosys Ltd, Chennai, Tamilnadu, IN

Dec 2022 - Aug 2023

- Developed a comprehensive Data Quality Framework to enhance client data accuracy across multiple processes.
- Built an **Automation** tool to validate Autosys JILs for pipelines, and presented it to stakeholders, leading to its successful promotion from LLE to PROD.
- Worked on migrating the ETL processes from Datastage to Hadoop for better performance with Apache Spark.
- Mentored junior engineers to implement complex logic checks based on business requirements.
- Prepared Design documents and coordinate with multiple teams including QA, and Batch operations to align on release timelines and prepare release checklist with test plan, test scripts, DTS. Managed CRQs(Change Management request) and coordinated with stakeholders to ensure smooth releases.
- Create JIRA requests and handle change management processes to facilitate seamless deployment of code to production. Managed and executed production release cycles, ensuring timely and efficient code delivery through version control and change management tools as part of **Release Management Team**.
- Collaborated with cross-functional teams to ensure integrity and stability of production systems during releases and mentored L3 team as part of post prod activities to ensure smooth project handover after PIW period.
- **Achievements:** INSTA AWARDS for delivering automation and leading tight deadline projects successfully.

Senior System Engineer, Infosys Ltd, Chennai, Tamilnadu, IN

Feb 2021 - Dec 2022

- Communicated effectively across multiple stakeholders and gained exposure on collaborating with a team of 15 engineers for developing the Banking portal.
- Worked on client requirements to develop APIs using Java and tested them using SOAP and REST protocols.
- Executed complex SQL queries to support API functionality and ensure seamless integration with the database.

System Engineer, Infosys Ltd, Chennai, Tamilnadu, IN

Oct 2019 - Feb 2021

- Troubleshoot, diagnose and resolve system issues, while doing follow-up on the root cause, analyze and work with guidance from a senior engineer and maintain accurate documentation on the changes in APIs.

EDUCATION

- **MSc Computational Sciences, Laurentian University, Ontario, CA** Sep 2023 – Dec 2024
- **Bachelor of Engineering in Computer Science, Anna University, Chennai, IN** Aug 2015 – Jun 2019

ACHEIVEMENTS

- INSTA AWARDS - for delivering automation of workflows to prevent production issues in AutoSys jobs. **(Dec 2022)**
- INSTA AWARDS - Pioneer in setting up 150+ data quality workflows in record time for PCHH process exceeding client expectations. **(Jul 2023)**