

Karan Wadhvani

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EDUCATION

M.S. Computer Science Expected May 2023
Arizona State University, Tempe, AZ GPA: 3.56/4

B. Tech Computer Science & Engineering 2016 - 2020
National Institute of Technology Warangal

TECHNICAL SKILLS

Programming Languages: Java, C++, Python **Cloud:** AWS Certified Developer – Associate [[Badge](#)]
Front End: HTML, Bootstrap, JavaScript, Angular **Back End:** Django, Spring Boot, Microservices, REST APIs
Databases: MySQL, PostgreSQL, MongoDB **Frameworks and Tools:** Agile (Scrum), JIRA, Confluence

WORK EXPERIENCE

Fidelity Investments Bangalore, India
Executive Graduate Trainee 08/2020 - 05/2021

- Underwent 4 months **training in full stack development** using Spring Boot, Angular, Node.js and Oracle Database following Agile (Scrum) and Test Driven Development (TDD) development methodologies.
- Implemented 15% of the required functionality for a communications product using **Spark/Scala** on AWS Elastic MapReduce in a 6-member Scrum team and built a declarative CI/CD pipeline using **Jenkins** which involved orchestration with Maven, Artifactory, Sonar, Veracode resulting in reduction of application execution time by **5x** compared to the legacy system.

Leap Technology Intern 05/2019 - 07/2019

- Developed a document **image processing** solution for document image classification using a convolutional **neural network** and extraction of relevant text from the images using Tesseract OCR, deployed as a **Flask** application on AWS' EC2 instance, achieving an accuracy of 94.24% on a dataset of 10,000 images.

Web & Software Development Cell, NIT Warangal Warangal, India
Tech Lead, Senior Developer, Developer 09/2017 - 07/2020

- Spearheaded a team of 4 for the migration of feedback module from PHP to **Django** for the student and faculty portal.
- Mentored 5 developers for a period of 2 years and held 7 workshops on API development, MVC architecture and single page application websites.
- Coordinated development of a website-based **school management system** for a local school as a community project – requirements analysis, database design, software design and implementation.

PROJECTS

Big Data Geospatial Analysis of NYC Taxi Trips [[GitHub](#)] 09/2021 - 11/2021

- Led a 6-member team in designing a hot zone and hot spot analysis engine using spatial statistics on NYC taxi trips data spanning 7 years to obtain 50 most significant hot spot cells using Apache Spark and Scala on AWS Elastic MapReduce.

Content-Based Image Retrieval System with Relevance Feedback [[GitHub](#)] 09/2021 - 12/2021

- Implemented a **content-based image retrieval** (CBIR) system to **search similar images** using locality sensitive hashing and vector approximation index files, achieving an **accuracy of 77%** in Olivetti faces dataset with 12 image transformations resulting in a dataset of 4800 images.
- Enhanced the accuracy of similar image search to **93%** by combining **decision tree** and **support vector machine** classifier-based relevance feedback in the CBIR system.

PUBLICATIONS

- Koratomaddi, P., **Wadhvani, K.**, Gupta, M. and Sanjeevi, S., 2021. Market sentiment-aware deep reinforcement learning approach for stock portfolio allocation. *Engineering Science and Technology, an International Journal*, 24(4), pp.848-859. DOI: <https://doi.org/10.1016/j.jestch.2021.01.007>
- Koratomaddi, P., **Wadhvani, K.**, Gupta, M. and Sanjeevi, D., 2020. A Multi-Agent Reinforcement Learning Approach for Stock Portfolio Allocation. *8th ACM IKDD CODS and 26th COMAD*, pp.410. DOI: <https://doi.org/10.1145/3430984.3431045>