Ravi Vats
Software Engineer | Data Science | ML | 2x Azure Certified, 1x AWS Certified
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EXPERIENCE

Grab | Singapore | Senior Software Engineer | MAR 2021 – Present
- Working in the Deliveries organization of the firm on creating & enhancing gRPC and REST APIs, microservices to manage food or general delivery (i.e. express) orders from creation to completion for a scale more than **2 million orders per day**.
- Worked on a python script that automates checking AWS Infrastructure spending patterns and **uses ML algorithms to highlight the services costing more during the days/months with anomalous spending increase**, and then tuned the infrastructure of such services (i.e. to use more CPU %, Disk per node), which led to reduced cost of AWS Infra across 7 microservices in my team by **30%**.

Previous: Software Engineer | AUG 2019 – MAR 2021
- Designed and implemented a partner wise food-order-data streaming and collection pipeline that can be used to share food-order-data across all countries with big partners on a daily basis. (Kafka, SQS, REST APIs)
- Recognized as Employee who went "**Above and Beyond**" to deliver value to the firm. (**FEB 2020, NOV 2020**)
- **Tech-Stack**: GoLang, gPRC, Protobuf, RedisDB, Apache Kafka, Apache Flink, Terraform, GoMock, Testify, AWS Services (CloudFront, S3, Route 53, Lambda, Lambda@Edge, SQS)

Morgan Stanley | Bangalore, India | Technology Associate | AUG 2018 – AUG 2019
- Worked on implementing Data Engineering pipelines that fetch high volume (**~500 million rows/day**) data related to financial trades present in files, streams, and databases onto Apache Spark and run Data Quality rules on this data to generate post-trade reports. **(JAN – AUG 2019)**
- Felicitated with **Rookie Award** for being the best newcomer in the Institutional Securities Tech division at Morgan Stanley. **(APR 2019)**
- Completed Technology Analyst Program (TAP) by Mallon Associates which covered various CS domains like Operating Systems, DBMS, Data Science, NLP and languages like C++, Java, Scala, and financial training. **(AUG – DEC 2018)**
- Worked on a web-based Dashboard using **Angular 6** and **Java 8** that collects Securities Reference Data from various data sources and creates visualizations on top of them. **(DEC 2018)**

Morgan Stanley | Bangalore, India | Software Development Intern | JAN 2018 – JUL 2018
- Worked in the field of Data Engineering to create real-time message pipelines using **Apache Kafka** and **Java 8** for real-time Data Quality checking of orders using business rules.

Robert Bosch Eng. & Business Solutions | Bangalore, India | Research Intern | JUN - AUG 2017
- Worked on communication protocols like MQTT, XMPP to enable Home Automation by creating smart switches.
- Worked on **AWS cloud** and **developed an android application** by which the user controls the IEDs (Intelligent Electronic Devices) & **wrote code in Lua** language to program devices like Node MCU and Raspberry Pi that receive the instructions sent from the Android application and map it to IED actions.

Yoska Technologies | Bangalore, India | *Intern (Mobile App Development)* | JULY 2016 - AUG 2016
- Worked on the development of company's **Android application** named '**Yoska Coach**' which gives a medium for coaches to monitor & train their athletes. Areas that I worked on was writing code in Java 8 to support:
  a.) Image Downloading and Caching b.) Profile Activities of Coach, Athlete c.) Call and Message Functionalities

ICUCS, RIT | Bangalore, India | Mobile & Web Application Developer | APR 2016 - DEC 2016
- Worked on a project called "Tally Reports" which fetches data from Tally ERP automatically on any change made & displays that to the user i.e., the owner of a company, on a mobile app. Areas that I worked on were: a.) Report retrieval from Tally ERP b.) Data retrieval from server c.) UI/UX, populating Charts, List views and Card views of the Mobile app "Tally Report Genie"

SKILLS
- **Concepts/Domains:** Data Structures, Algorithms, Large Scale System Design, Machine Learning, Deep Learning, Reinforcement Learning, Data Science, OOPS, Mobile and Web Application Development, DBMS (MySQL, MongoDB).
- **Languages:** GoLang, Python, C++, Java, C, R and JavaScript.
- **Tools, Platforms, Frameworks:** gPRC, Protobuf, Apache Spark, Apache Kafka, Apache Flink, Terraform, TensorFlow, PyTorch, Angular, Android Studio, Spring, JUnit, GoMock, Testify, NodeJS.
- **Cloud services:** AWS (CloudFront, S3, Route 53, Lambda, Lambda@Edge, SQS)

EDUCATION

Georgia Institute of Technology | Atlanta, GA | AUG 2021 – DEC 2024 | Master of Science, Computer Science | Current GPA: 4.0/4.0
Relevant Courses: **1.** Machine Learning for Trading **2.** Deep Learning

Ramaiah Institute of Technology | Bangalore, India | AUG 2014 – JULY 2018 | Bachelor of Engineering (B.E.), Computer Science | CGPA: 9.40/10 | Activities and Societies: CodeMSRIT, ICUCS MSRIT, TEDx MSRIT, ACE MSRIT

Loyola High School | Patna, India | Graduated 2014 | CBSE Class 12th | Physics, Chemistry and Mathematics | Percentage: 92.6 | Activities and Societies: LHS Debating Society, LHS Basketball Team

Loyola High School | Patna, India | Graduated 2012 | CBSE Class 10th | Science | Percentage: 95.0, CGPA 10/10 | Activities and Societies: LHS Debating Society, LHS Basketball Team

PROJECTS

- **Machine Learning**: Movie Recommender System which uses ensemble models of Collaborative and Content-based filtering algorithms to recommend movies to users with precision and diversity.
- **Deep Learning:** Simultaneous recognition of multiple objects in an image using YOLO model.
- **Cityzen:** A smart public complaint redressal platform with Semantic Similarity matching and various data analysis and comparison capabilities. Link: https://github.com/ravivats/Cityzen-webapp
- **Sentiment Analysis:** of a customer review/post on Amazon through Named Entity Identification.
  Link: https://github.com/ravivats/Sentimental-Review-Analysis
- **Temperature controlled fan:** speed automation with both remote manual control and automatic control based on temperature using Android Application using Arduino UNO, Bluetooth Module HC05 and temperature sensor LM35. Link: https://github.com/ravivats/arduino-fan-control
- **Text Mining on Twitter** and finding frequently used words, visualizing it in a word cloud.
  Link: https://github.com/ravivats/Twitter-TextMine
- **PyGame** based on Czech card game called Pexeso. Link: https://github.com/ravivats/pexeso-pygame
- **Data Analysis** on Air Pollution levels in Bangalore using polynomial regression.
  Link: https://github.com/ravivats/Air-Pollution-Analysis-BLR
- **E-commerce platform** called "FlopCart" made using SAP UI and SAP Web IDE
- **Olympic Database Management and Facts Retrieval System** using MySQL and Java Applets.

COURSES AND CERTIFICATIONS

- **Amazon Web Services:** AWS Certified Solutions Architect – Associate
- **Microsoft**: Microsoft Certified Azure Fundamentals, Microsoft Certified Azure Data Science Associate
- **Udacity:** Deep Learning Nanodegree, Deep Reinforcement Learning Nanodegree, C++ Nanodegree
- **Coursera:** Machine Learning by Stanford University, Intro to TensorFlow
- **NPTEL & IIT:** Introduction to Programing in C, Design and Analysis of Algorithms, Introduction to Modern Application Development
- **DataCamp:** Intro to Python for Data Science
- **CSE Department, Ramaiah Institute of Technology:** Data Science and Exploratory Analysis
- **Google:** Applied CS with Android, Android Application Development

ACHIEVEMENTS

- Awarded "**Best Achiever Award**" (CSE Dept.) for 2018 UG batch by Dept. of CSE, RIT, Bengaluru.
- Ranked 1st in PES University INIT Hackathon 2016. (11th Feb,2017)
- Ranked 1st in Xceler Hackathon 2016. (12th-20th Nov,2016)
- Ranked 1st in SAP Hackathon 2016 at MSRIT. (6th Nov,2016)
- Ranked 1st for the project "Data Analysis on the Extent of Air Pollution in different areas of Bangalore" by CSE Department, RIT. (20th Sep, 2016).
- Ranked 2nd in IBM ICare Hackathon 2016. (14th-15th Oct,2016)
- Ranked 2nd in Debugging Competition in Annual CSE Fest, RIT, Bangalore. (20th Mar, 2016)
- Ranked 2nd in PaySe Ethical Hackathon. (17th-18th Mar, 2017)
- Ranked 3rd in WIE Ideathon at RIT. (8th Mar, 2017)
- Ranked 1st in Coding Contest organised by CodeMSRIT, RIT, Bangalore. (14th Nov, 2015)
- Finalist: J.P. Morgan Chase Code for Good Hackathon 2017. (8th -9th July, 2017), NASA Space Apps 2017, Bangalore for VR application "Space Jockey". (29th-30th Apr, 2017). Link: http://bitly.ws/9Vm8
- Finalist in SOSC Ideathon 2017 at RIT, Bangalore. (10th-11th Mar, 2017)

VOLUNTEER EXPERIENCE

- **Volunteer (Community Service):** Senior Citizen Clinic at Community Centre, Hougang Ave, Singapore (OCT 2019), The Nudge Foundation (APRIL 2019), Akshaya Patra Foundation (JUNE 2018)
- **Digital Designer**: TEDx MSRIT 2015, TEDx MSRIT 2016, IGNITE 2016 MSRIT
- **Event Coordinator** : Adhoc 2016 MSRIT (Annual CSE Dept. Fest)
- **Publicity Volunteer**: Incognito 2015 MSRIT (Annual CSE Dept. Fest)