Amit **Agrawal**

Software Development Engineer | Creative Problem Solver

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Education

Birla Institute Of Technology and Science, Pilani — *Pilani, RJ*

B.E. (Hons.) | **CGPA 7.68/10.0** — *2015-2020*

- **Relevant Courses:** Object Oriented Programming, Operating Systems, Machine Learning

CBSE Class XII (Science) — *Indore, MP*

Shree Vaishnav Academy | **92.2%** — *2015*

Skills

Languages Javascript, Typescript, Python, Java, LaTeX

Tools/Frameworks AWS, Kubernetes, Docker, Gitlab, Node.js, Express, mongoDB, Redis, Flask, mocha, Pytest, Sentry, Graphana, OpenTelemetry, SpringBoot, Maven, Junit, mockito

Experience

Hyperverge Inc. — *Bangalore, KA*

Software Development Engineer — *June 2020 - present*

- Worked on enhancement of microservice architecture and created a cloud-agnostic stack for SEA nations. Setup CI/CD using Gitlab.
- Converted the synchronous architecture to Asynchronous event-based architecture thereby reducing response times by about 40%.
- Set up performance monitoring system with elasticsearch as well as alerts using graphana and opsgenie to achieve 99.9% uptime.
- Used tools like sentry, opentelemetry as well as set up test environment to reduce 5xx error rates to almost zero.
- Used kubernetes to setup a job orchestration and scheduling system for improving efficiency in GPU usage for model training.

Morningstar, Inc. — *Mumbai, MH*

Technology Intern — *Jul 2019 - Dec 2019*

- Developed micro-services and RESTful APIs using AWS components such as s3, lambda, dynamoDB, CloudWatch, Splunk, etc.
- Performed extensive integration testing as well as unit testing for the same JUnit 5 and mockito framework.
- Participated in AWS DeepRacer Challenge, trained autonomous race car using Reinforcement Learning, best lap-time = 10.19 s.
- **Recognition:** Awarded Morningstar monthly SPOT Award for September 2019.

Central Electrical Engineering Research Institute (CEERI – CSIR) — *Chennai, TN*

Research Intern — *May 2017 - Jul 2017*

- Worked on "Embedded Wireless-Enabled Plastic Waste Sorting System" using python language and Raspberry Pi Operating System.
- Implemented Spectral Angle Mapping Algorithm to segregate different kinds of plastics by comparing their NIRS spectra.
- Developed a GUI in python using tkinter toolkit for remote monitoring, spectral data collection and information management.

Academic Projects

Jan 20- Jun 20 **AN OPTIMIZATION MODEL FOR VRP IN DELIVERY OF NON-PERISHABLE GOODS** - Implemented optimization algorithms like Intra-route Local Search, Inter-route Local Search and TABU Search that provide a sub-optimal solution to this NP-hard problem. Compared Cost and CPU-time metric and effect of instance size.

Aug 18 - Dec 18 **CORPORATE CREDIT RISK ASSESSMENT USING MACHINE LEARNING AND STATISTICAL METHODS** - Analyzed determinants of Credit default risk and modeled default risk behavior of firms to improve accuracy of default predictions. Achieved a training accuracy of 80.78% using an ensemble of SVM, Decision tree and KNN classifier.

Leadership

Jan 18 - May 18 **Project Leader, Gyanbodh (Baas), Nirmaan Organization**, led a team of more than 20 volunteers working for holistic and sustainable development of Baas community having 600+ beneficiaries.

Honours & Awards

2014 **KVPY Fellowship (Awardee)**, Dept. Of Science and Technology (DST), Govt. of India

2013 **NTSE Scholarship (Awardee)**, National Council Of Educational Research And Training (NCERT), Govt. of India

2012 **National Standard Examination in Junior Science (NSEJS) (Cleared)**, Indian Association of Physics Teacher (IAPT)