Amit **Agrawal**

SOFTWARE DEVELOPMENT ENGINEER | CREATIVE PROBLEM SOLVER

425, Hukumchand colony, Indore (MP)

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Education

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

B.E. (HONS.), MECHANICAL ENGINEERING AND M.SC. (HONS.), ECONOMICS |**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*

Experience

Hyperverge Inc. *Bangalore, KA*

SOFTWARE DEVELOPMENT ENGINEER *June 2020 - present*

- Worked on enhancement of microservice architecture and creation a cloud-agnostic stack for SEA nations in AWS, Azure and Alicloud.
- Converted the synchronous architecture to Asynchronous event-based architecture thereby reducing response times by 40%.
- Set up alarms using cloudwatch metrics, graphana and opsgenie based alert mechanism to achieve 99.9% uptime.
- Used tools like sentry, opentelemetry as well as set up test environment to reduce error rates to almost zero.

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".
- Implemented Spectral Angle Mapping Algorithm in Python to segregate different kinds of plastics by comparing their NIRS spectra.
- Developed a wireless GUI for remote monitoring, data collection and information management in python using tkinter toolkit.

Skills

Operating Systems	macOS, Linux, Microsoft Windows
Languages	Python (intermediate); R (beginner); Fortran (beginner)
Tools	Bash (intermediate); C-shell (intermediate); Radio Astronomy software (AIPS, CASA, eMERLIN CASA Pipeline)

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.(`https://github.com/aagraw2/route-planner`)

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.(`https://github.com/aagraw2/sop-nvms-eco`)

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)