Amey Ambade

Data Scientist | Machine Learning
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WORK EXPERIENCE

SCHLUMBERGER | Data Scientist — Houston, TX | Mar 2019 – present

- Led project management and data science for a 3-person team, for automated real-time well control optimization with dynacard **image classification** models to identify failure signatures in 100+ wells for a large American firm. Resulted in $10M+ in operational savings, 60 % faster detection time while reducing downtimes by 19%. Tech: **deep learning**, **computer vision**, **TensorFlow**, **Docker**, **Flask**, IoT Edge devices.
- Designed, built and operationalized Smart Surveillance, an **ML** solution for hydrate detection for an international firm generating $2M+ in revenue, boosting production by 15%, reducing labor by 12%. Tech: **Keras**, **Dataiku**
- Developed systems to detect emulsions for South American fields using **multivariate time series ensemble tree models**, reducing non-productive time by 25% and saving $1M+ in maintenance costs. Tech: **Tensorflow**, **Dataiku**
- Developed **failure and anomaly prediction** models for Prognostic Health Management, implemented ML backend infrastructure and drove collaboration by partnering with field, client, and product teams to build apps to visualize wells based on their production rates using machine learning. Tech: **Azure ML**, **Tensorflow**, **Dataiku**

SCHLUMBERGER | Data Scientist Intern — Houston, TX | 2018

- Built a **deep learning**-based CNN model to classify erosion levels in mechanical tools and deployed a scalable cloud-based API, increasing precision by 8% and reducing detection time by 10%. Tech: **TensorFlow**, **Docker**, **Flask**
- Developed LSTM models to predict cracking of drill sensors, improving inventory control by 25%.
- Built a health analyzer application to predict tool sensor failures to aid scientists and engineers. Tech: **Python**, **Flask**

COLUMBIA UNIVERSITY | Graduate Research Assistant — New York, NY | 2018

- Built a session-based recommendation system using a deep learning-based encoder-decoder architecture incorporating contextual information from users and an attention mechanism, improving displayed recommendations in e-commerce scenarios by 3% over present baselines on the YouChoose dataset (CNARM).
- Developed NLP and ML software to predict outcome of contractual damage lawsuits to benefit academics in debates, parties in drafting contracts, counsels in pre-trial exchanges and judges in rulings.

ECOLE INTERNATIONALE (EISTI) | Software Engineer Intern — Paris, France | 2016

- Built automatic data extraction and analysis models using NLP and machine learning for AREL, an e-learning platform used by 1500+ French students and alumni.
- Developed software to restructure the web app, enhancing app usability.

EDUCATION

M.S. Computer Science (Machine Learning Specialization) — New York, NY | 2018
Columbia University

B.Tech. Computer Science and Engineering — Indore, India | 2017
Indian Institute of Technology (IIT)

PATENTS AND PUBLICATIONS

IS21.3850-US Real-Time ESP Smart Alarms Suite for Operationalizing Emulsion and Gas Degradation Detection Workflows
IS21.4020-US Artificial Intelligence-Driven Real-Time Dynamometer Classification for Diagnosis of SRPs
IS22.0315-US Failure Prediction for Run-Life Estimation of ESPs for PHM
IS22.0314-US Machine Learning Model Operationalization Management Framework for Continuous Updates on IIOT Devices
2021 SPE Symposium Electrical Submersible Pump Prognostics and Health Monitoring using Machine Learning and NLP

AWARDS

PbS Award 2021 for Exceptional Development and Management of a High-Priority International Client Project
BeOutstanding Honor 2020 for Excellence in Client Engagement and Satisfaction through Building AI and ML Solutions

SKILLS

Programming Languages: Python, SQL, R
Data Science Tools and Frameworks: TensorFlow, Keras, Sklearn, PyTorch, Docker, OpenCV, Google Cloud, Git, Dataiku