

Education			
Year	Degree/Certificate	Institute/School, City	% / CGPA
2015	B.Tech. (Computer Engineering)	College of Engineering Pune	8.22/10
2011	Class XII (Maharashtra Board)	Shri Shivaji College of Science, Akola	92.5% (Comp Sci: 99%)
2009	Class X (Maharashtra Board)	Noel Convent School, Akola	95.23% (Math: 100%)

Projects	
Boosting Trade Settlements Role: Full Stack Data Developer	
<i>2018 - Barclays Corporate Bank</i>	
What	Identify patterns and feature interactions to reduce failed trade settlement instructions sent to clearing houses. Settlements are usually straight through processing (STP) but once in failed queue, trade instructions are manually repaired which cost millions to the organization
Solution	Cloud ready RESTful web service that helps users probe data, visualize inference results, locate decision boundaries with respect to the feature values of a unique trade and early prediction of failures in instructions submitted to clearing house
Impact	Trache 1 of delivery achieved 37% reduction in total cost of manual repairs (Prediction F1 score: 92.4%) Trache 2 to monitor performance of auto-repair functionality , utilizing 'What-if' tool by Google AI Trache 3 to deploy auto-repair functionality
How	Establish partial dependencies between important features, build association rules for L1 counterfactual logic Auto-repair is finding the right association between important features and their possible correct values. This new association is then checked for failure via prediction model before sending to clearing house
Learning	ML Interpretability for business/regulators, Importance of domain knowledge, Feature Engineering, Stacked Generalization
Text Classification on Unstructured Data in Scanned Documents Role: Data Engineer	
<i>2017 – Barclays Corporate Bank</i>	
What	Operations Team receives many customer invoices and contractual papers as scanned documents. These are manually read to pick up key values like customer name, address, shipping container details etc. Extracting these details is not only useful in automating processes but also in screening for sanctions. The problem statement is to read these named entities and populate against their correct labels.
Solution	Cloud ready RESTful web service that consumes scanned documents and classifies named entities in predefined categories
Impact	Classification accuracy of 62% . Work in progress for reducing false positives
How	Pre-process scanned documents, feed to Optical Character Recognition (OCR) engine, do named entity recognition, improve labelling results by associating values to nearby keys in scanned documents
Learning	Ceiling analysis in machine learning pipeline, pre-processing for OCR, Euclidean distances

Technical Paper	
Secure and efficient message passing in distributed systems using One Time Pad Role: Developer	
<i>2015 – College of Engineering Pune</i>	
Published at International Conference on Computing, Analytics and Security Trends, 2016 DOI: 10.1109/CAST.2016.7915001 – IEEE Xplore	
What	In this paper a highly efficient and secure implementation of message passing interface (MPI) in distributed environment has been proposed and implemented
Solution	VAN-MPICH2 integrates security measures to ensure data confidentiality using One-Time Pad (OTP) encryption technique. It is designed as a complete library thus offering confidentiality services in the underlying levels with no change in the user code. Since the proposed encryption implementation decreases the security overhead substantially, VAN-MPICH2 manages to provide confidentiality with very insignificant decrease in performance
How	Add encryption/decryption code in socket layer of MPI Library for abstraction, Key sharing via Diffie-Hellman
Learning	Importance of benchmarking, peer review, studying large codebase

Technical Skills	
Programming	Python, C, C++, C#, Unix Scripting, AngularJS, Arduino
Frameworks	Pandas, Scikit Learn, Tensorflow, PyTorch, pyQuil (Rigetti's Quantum SDK), Elasticsearch-Logstash-Kibana
Applications	Tableau, Ab Initio, Informatica, SSIS, TeamCity, Git, BitBucket, SonarQube
Databases	HBase, MongoDB, Teradata, MSSQL, Oracle, MariaDB

Professional Experience		3 years 4 months
Barclays Execution Services		
<u>Full Stack Data Developer</u>	<u>Chief Technology Office, Barclays International</u>	<u>Sept 2018 onwards</u>
Oversees technology landscape and delivery for the entire organization and reports Key Performance Indicators and metrics to senior leadership		
Responsibilities:		
<ul style="list-style-type: none"> ● Build and maintain end-to-end Metrics Reporting framework on development journey across Barclays ● Enhance predictive metrics over incident, change management data and CI-CD pipeline ● Refurbish existing infrastructure with NoSQL capabilities, new Dashboards in Angular and resilient API based data ingestion 		
<u>Data Engineer</u>	<u>Innovation, Data and Integration Services, Corporate Banking</u>	<u>May 2016 - Sept 2018</u>
Design, development and implementation of data transformation and warehousing applications		
Responsibilities:		
<ul style="list-style-type: none"> ● Data Lab Setup: Designing and developing an end-to-end masking engine for Data Scientist and Business Analyst teams to access production data. The engine is developed in Python and is generic, modular and configurable ● Trend analysis of non-STP payments and suggesting improvements leading to 34% reduction in volume ● Analysis on reducing manual repair due to erroneous deactivated accounts thus saving operation team's efforts by ~40 payments per day ● Flagging non-routine payments for Corporate Clients using association rule learning by Apriori Algorithm ● Designed and developed 7 ETL interfaces in 6 months including custom scripts for digitally signing regulatory reports 		
Achievements:		
<ul style="list-style-type: none"> ● Annual rating for 2017 and 2018 - Outstanding (top 10% of all employees) ● TC01 Best Performer Award and multiple appreciation mails from Ex-COs and CTO for Boosting Trade Settlements Project 		
<u>Graduate Analyst</u>	<u>Tax Technologies, GFTS</u>	<u>August 2015-May 2016</u>
Responsibilities:		
<ul style="list-style-type: none"> ● Developed Corporate Group Tax Relief Tool where subsidiaries in Barclays surrendered their losses to other subsidiaries' profit thus reducing the total payable tax for the Corporation as a whole. Developed in C# with MVC architecture 		
<u>Analyst, Intern</u>	<u>Finance Technologies, GFTS</u>	<u>Summer 2014</u>
Responsibilities:		
<ul style="list-style-type: none"> ● Fix bugs in book keeping system + consolidate interfaces and technical handshakes between multiple systems in Accounting and book keeping process which was later useful in resolution of dependencies during decommissioning process 		

Co-Curricular activities		
● Machine Learning: A Stanford online course by Prof Andrew Ng [Verify]		2018
● Deep Learning: CS7015 offered by IIT Madras on maths in DL, CNN, LSTM [Verify] [Syllabus]		2018
● Quantum Information and Computing: IIT Bombay's NPTEL course on fundamentals of quantum computing [Verify] [Syllabus]		2016
● Rank 164 in State Engineering Entrance Exam (top 0.05%)		2011
● Tech Speaker at PyData Pune November Meetup, Oct and Nov 2018's Barclays India's Tech Surgery sessions		2018

Achievements & Extra Curricular Activities		
● Guinness World Record: "Most people solving Rubik's Cube" (2012-2018), conceptualized and led the event		2012
● Curated a customized cubing technique, taught to > 3000 people from age 8 to 74, sighted and visually challenged		2012-15
● Worked as Google Student Ambassador and founder of Google Student Club, COEP		2013-14
● Represented India at 19th World Business Dialogue, Cologne, Germany on "Globalisation: Disrupted?"		2016
● Secured Second at Q1 and First in Q2 - Barclays International Hackathon in 2018 amongst > 70 teams		2018
● Secured First at BX India Hackathon 2019 in 108 teams by implementing a Deep Learning Solution for Ops		2019
● Secured First in Annual Hackathon organized by Google Developer Group (Pune Chapter)		2014
● Rise Mumbai Ambassador at Barclays, gives a unique platform to learn from startups and trends		2018
● Volunteered at CSPathshala, initiative for revolutionizing primary and secondary level Computer Science education across India		2016-17
● Volunteered as Scribe to visually challenged students for Banking Entrance exams since last 5 years		2012 - now
● Passion for running (1*21km, 8*10km @ 6.15min/km pace)		2017-now