

AMAN UPADHYAY

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Work Experience

- **Fraud Risk Decision Scientist, American Express** *July 2019 - Present*
User Behavior Analytical (UBA) AI Product
 - Built and deployed 2 Generations of UBA model across Accertify clients & industries which involved real-time analysis of **Big Data** streams (**0.5 billion daily event rows**) of user activity on AWS/MapR servers using **Apache Spark (Pyspark)/Python** for feature engineering, ML modeling and analytics
 - Built over 300 attributes tracking the subconscious behavior to discern legitimate users vs fraudsters
 - Devised intelligent AI systems to detect **fraudulent** users, **Account Take-Over** events, **bots'** activity, and myriad of fraud attacks on client webpages
 - Gen 2 is actively decisioning on **12+ major global clients**, providing annual savings of over **USD 15 MM****Fraud Detection AI Products**
 - Implemented 5 industry and custom clients-specific fraud risk ML models for 30+ **Fortune 500 clients** spread across North America, EMEA and Asia Pacific, achieving fraud savings of over **USD 20 MM** annually
 - Led, mentored, and trained analysts, managers and partners across India, the UK, and the US on newly deployed **MapR infrastructure** and built systems for enabling ML business-as-usual workflows
 - Led the development of **100+ PySpark tools/systems** and **Deep Learning R&D** for building AI models and strategies for business problems in e-commerce risk management
- **Business Analyst, Supply Chain Operations, PharmEasy** *May - Jul 2018*
 - Comprehensive analysis of medicine sales and customers' granular data research from AWS RedShift Database using PostgreSQL and Python
 - Strategized a profit maximizing inventory management algorithm for courier warehouses
 - Produced actionable conclusive data to prioritize medicines to be procured for inventory

Educational/Scholastic Qualifications

- IIT Kanpur (Dual Degree) M.Tech. in BIOLOGICAL SCIENCES AND BIOENGINEERING **CGPA: 10.0/10.0**
B.S. in CHEMISTRY | **CGPA: 8.7/10.0**
- **CFA** Level 1 Candidate
 - Awarded **Academic Excellence Award** twice: **(S.P.I) 10/10** in 5 semesters among 1100+ students
 - Received **A*** for exceptional performance in multiple courses

Selected Projects

- **VisionX - Intelligent Traffic Control System AI product** *Sep 2018 - May 2019*
All India Winner - Funded by LaTrobe University, Melbourne
 - Innovated and developed an end-to-end CNN based AI solution which tracked vehicular density using CCTVs and intelligently modulated traffic lights to improve existing traffic congestion problems
- **Prediction of natural disasters and calamities by sentiment analysis** *Sep - Oct 2018*
Microsoft CodeFunDo++ 2018 Hackathon - 1st Runner-Up among 79 teams
 - Hosted a web-application on **MS Azure** (developed using **Flask**) based on a back-end **tweet crawler**
 - Applied keywords-phrases extraction and **sentiment analysis ML APIs** to predict impending disasters
- **Discovering Novel Noncovalent Interactions in Biomolecules: Thesis Published** *Jul 2017 - Jun 2020*
Prof. R. Sankararamkrishnan, Dept. of Biological Sciences and Bioengineering, IIT Kanpur
 - Exhaustive statistical hypothesis experiments to confirm the existence of selenium hydrogen bonds
 - Data analytics on massive biomolecular databases, Quantum Mechanical calculations, and deployed BioIn-formatics algorithms using State-of-the-Art Super Computers

Technical skills

- Proficiency : Python | PySpark | MapR - Hadoop | AWS | EMR | MS Excel | SQL | SAS | Bash
 - Work/Project Experience: LATEX | R | MATLAB | C/C++ | FORTRAN
- △ An Immensely Curious and Avid Learner: Have read over 200 books and completed dozens of courses and certifications - [GoodReads](#)