

ASTHA PURI

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SUMMARY

As a seasoned Data Scientist specializing in responsible AI practices, I focus on driving impactful projects in healthcare, customer data platforms, and machine learning pipelines. With a track record of architecting innovative recommendation systems and leading teams to optimize user experiences, I bring a unique blend of technical expertise and leadership. In healthcare, I prioritize patient well-being and data security, ensuring that every innovation aligns with ethical standards. I am committed to propagating responsible AI practices, collaborating with others to empower future AI professionals. Let's unite to shape a future where AI revolutionizes healthcare while serving humanity responsibly.

SKILLS

SQL (Snowflake), Python (Scikit-learn, PyTorch, Tensor Flow), Neural Networks, R, PySpark, Statistics, DBT Labs, Machine Learning, Predictive Analytics, Natural Language Processing (NLP), Natural Language Understanding (NLU), Recommender Systems, Time Series Forecasting, Looker, Tableau, Segment, Amplitude, Mixpanel

EXPERIENCE

CVS HEALTH

New York, NY

Senior Data Scientist

Apr 2023 – Present

- Architected innovative 'You May Also Like' recommendation system using Word2Vec embeddings, fostering 30% higher click-through rates by deciphering user interactions into enriched feature vectors for precise content suggestions. Applied meticulous data preprocessing and hyperparameter tuning for optimal model performance and seamless platform integration.
- Innovated a successful Generative AI-driven POC for succinct product review summaries and sentiment analysis on the website. Leveraged advanced NLP models, resulting in 20% faster review comprehension and enhanced customer satisfaction through informed purchasing choices.
- Implemented real-time search autocomplete using RNNs on the company website, boosting search efficiency by 40% via data-driven modeling and learning from past search behaviors.
- Led and supervised junior data scientists in projects focused on enhancing the website's search experience. Coordinated project scope, milestones, and resources, resulting in the successful implementation of search optimization strategies that improved user engagement and satisfaction.

TWILIO SEGMENT

Los Angeles, CA

Senior Data Scientist

Feb 2022 – Feb 2023

Led ML and AI for Segment's Customer Data Platform(CDP), driving growth, profitability, and platform health. Collaborated with product managers, researchers, engineers and analytics leaders to deploy scalable ML solutions across the organization

- Saved \$240k annually by forecasting traffic for migrating customer's data to EU following GDPR and data privacy regulations, optimizing compute and storage resource allocation.
- Improved operational efficiency and reduced latency by 30% by designing and building analytics pipelines in DBT
- Grew demo rate by 7% by designing and running experiments across the customer acquisition funnel, to evaluate effectiveness of different marketing strategies and support research
- Developed a resource/cost-profit framework for finance and leadership to understand cogs and impact of initiatives on the bottomline forecasted to help them prioritize and build roadmaps on yearly initiatives (expansion, churn, operational/support cost, retention)
- Designed and launched success and operational metrics of products ([HIPAA](#) and [Profiles Sync](#)) across their pilot, beta and GA stages to understand customer adoption and make go/no-go decisions

ORACLE

Broomfield, CO

Lead Data Scientist - Machine Learning

Aug 2021 – Feb 2022

ML and AI owner for multiple product development work streams - KPI definition and data instrumentation design, ad-hoc and executive reporting and building and deploying Machine Learning pipelines

- Improved customer retention by 9% by predicting and flagging customer SaaS subscriptions for Fusion Applications, that were likely to churn in next 9+ months using classification models, enabling support and sales team to take actionable steps to improve customer retention
- Reduced escalation handling costs by 15% by deploying MIT's DeepMoji for customer sentiment analysis, predicting service request escalation using ensemble models in PySpark

Data Scientist - Machine Learning

July 2018 – July 2021

- Built data pipelines that processed stream events using [Kafka compatible services](#) (with OSAK and Spark applications) to provide real-time analysis of streaming data
- Analyzed time series data from server logs, studied trends across KPIs (restarts, downtimes, SLOs) and built web applications and visualizations for leadership, securing application authentications and data.
- Performed statistical testing (t-test, chi sq test, etc.) to understand product performance and identify areas of improvement.

CARLSON ANALYTICS LAB

Minneapolis, MN

Machine Learning Consultant

June 2017 – May 2018

- Forecasted daily footfall in Nickelodeon Universe amusement park for 2018 using time series forecasting, decreasing error rate in capacity planning by 12%
- Optimized promotion strategy to increase market share by building region-level fractional logit models and developed randomized experiments (A/B tests) to measure campaign impact.

FORD MOTOR COMPANY

Chennai, India

Business Intelligence Engineer

July 2015 - April 2017

- Built self-service BI reports in Tableau, QlikView and SAP BO for global car parts, maintenance, warranty, and pricing teams. Performed deep dive analysis and presented business insights to executive management.

ENGINEERING PROJECTS (INDIA) LTD

Delhi, India

Internship

Dec 2013 - Jan 2014

- Trained in planning, executing and monitoring engineering projects from inception to completion.
- Conducted research, prepared technical reports and assisted in design evaluations.

DREAM TECH LABS

Amritsar, India

Internship

May 2013 - Jun 2013

- Built an automatic advance flood detection system using sensors and electronics. Concluded the project by delivering a live demonstration showcasing the system's functionality.

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Machine Learning in Business

2020

UNIVERSITY OF MINNESOTA, Carlson School of Management, MN

Master of Science in Business Analytics (MSBA)

May 2018

Coursework: Prescriptive and Customer Analytics, Machine Learning, Time Series and Heuristics

VIT UNIVERSITY, India

Bachelor of Technology - Electronics and Communication (ECE)

May 2015

COURSES

- Hadoop Platform and Applications Framework, Coursera 2016
- IBM InfoSphere DataStage Essentials 9.1, 2016

- Google Cloud Platform Big Data and Machine Learning Fundamentals, Coursera 2019
- dbt Fundamentals, dbt Labs 2022
- Neo4j Fundamentals, Neo4j 2023
- Graph Data Modeling Fundamentals, Neo4j 2023
- Cypher Fundamentals, Neo4j 2023
- Guidance and Counselling, Optimus Center for Well-Being (Feb 1, 2020 to Oct 31, 2020)

BOOKS PUBLISHED

- Stars, Psyche and AI - Exploring Psycho-Astro Therapy (Walnut Publication)
- Narcissism Navigated - Harnessing AI for Personal Growth (BlueRose Publication)

BOOK/JOURNAL REVIEWER

- Reviewer for [MedCrave](#) Journal Publications
- Reliable LLMs by Rusheel Shahani (Manning Publication)
- Hugging Face in Action by Wei-Meng Lee (Manning Publication)
- Generative AI for Web Development (Springer Nature Publication)
- Paper reviewer for Synergy (National Level Technical Symposium), conducted by IETE, VIT University

PUBLICATIONS

[Google Scholar Profile](#)

- Book chapters published:
2023
 - Puri, A., Nayar, P., Bamel, P., Sindhu, B., Puri, A. (2024). Implementing Distress Screening and Psychological Assessment at the A.R.T. Clinic. Pub. by Indian Fertility Society (Ed.), Counselling in Assisted Reproduction Technology (A.R.T) (pp. 63).
 - Bamel, P., Puri, A., Nayar, K. D., Singh, T., Jogy, S. (2024). Use of Interest-Based Technology for Patient Care. Pub. by Indian Fertility Society (Ed.), Counselling in Assisted Reproduction Technology (A.R.T) (pp. 83).
 - Puri, A., Nayar, P., Bamel, P., Puri, A and Kumar, A (2024) Invisible Grief During A.R.T.. Published by Indian Fertility Society (Ed). Counseling in Assisted Reproduction Technology (A.R.T.) pp 23
- 2016
 - Banerjee, P, Puri, A. And Er. Astha. Geriatric Psychology: issues, concerns and effective management for well-being. In Power, Perception and Personality; Protagonists of Change. Published by Bloomsbury, New Delhi Pp 51-57. ISSN 978 -93-85936-13-5
- Research papers published:
 - [Internet of Things \(IoT\) based Attendance and Intrusion Detection System](#)
 - Bamel, P., Sindhu, B., Sindhu, S., Puri, A., Singh, T. (2024). Recent Eclectic Approach to Psychotherapeutic Interventions in the Indian Context - Subconscious Energy Healing Therapy (S.E.H.T). *International Journal of Creative Research Thoughts (IJCRT)*, 12(2), a434-a442. ([Link](#))
 - Puri, A., Bamel, P., Sindhu, B., et al. (2023). Recent advances in psychotherapy in the Indian scenario - subconscious energy healing therapy: S.E.H.T for infertility counselling. J Psychol Clin Psychiatry, 14(6), 182–194. DOI: 10.15406/jpcpy.2023.14.00750 3. ([Link](#))
 - Puri A, Sindhu BD, Puri A, et al. Hypnotherapy as an intervention in infertility treatment. Art Human Open Acc J. 2023;5(3):214–218. DOI: 10.15406/ahoaj.2023.05.00211 ([Link](#))
 - Banerjee P, Sindhu BD, Sindhu S, et al. Exploring the intersections of AI (Artificial Intelligence) in psychology and astrology: a conceptual inquiry for human well-being. J Psychol Clin Psychiatry. 2024;15(1):75–77. DOI: 10.15406/jpcpy.2024.15.00761 ([Link](#))

- Puri A, Banerjee P, Nayar P, et al. Understanding the impact of environmental pollutants on infertility counselling: insights from the Indian scenario. Art Human Open Acc J. 2024;6(1):35–37. DOI: 10.15406/ahoaj.2024.06.00218 ([Link](#))
- Puri,A, Navya,N and Shammi (2019). Malaise of Domestic Violence: Scarring Children’s Well Being ([Link](#))
- Amita Puri., et al. “Challenges Faced by Non BPD Spouse and Family: A Case Study”. EC Psychology and Psychiatry 7.12 (2018) ([Link](#))

PAPER PRESENTED/TALKS

- Women Who Code:
 - [Choosing the right metric for your business](#)
 - [SQL Intermediate 1](#)
 - [SQL Intermediate 2](#)
- DSS LinkedIn - [Increasing customer satisfaction in B2B using ML](#)
- FertiVision 2023, Gurgaon, India
- Featured on [spotlight](#) for Enterprise Generative AI Summit West Cost ([Resource Link](#))

2015

- Paper presented in International Seminar on Sustainable Development in 21st Century - A Global Perspective at Chaudhary Ranbir Singh University, Haryana
Topic: Managing Borderline Personality Disorder with Emotional Freedom Technique - A Case Study
- Paper presented in National Seminar on Quality Teacher Education in Modern Era at Vivekananda College of Education, affiliated to Jammu University
Title: Challenges to the introduction of ICT into education in developing countries
- Paper presented at Annamalai University, Chennai
Topic: Malaise of Domestic Violence: Scarring Children’s Well Being
- Paper presented in International Conference on Cognitive Behavioral Interventions at All India Institute of Medical Sciences (AIIMS), New Delhi
Topic: Therapeutic Interventions in Borderline Personality Disorder

2014

- Paper presented in National Seminar on the theme Developing Technologically Competent Teachers in Institute of Vocational Studies affiliated to Guru Gobind Singh Indraprastha University, Delhi and State Council of Education Research and Training, Delhi.
Topic: Students with learning disabilities and their use of information and communication technologies (ICT's)
- Paper presented in National Conference on Quality Assurance in Education at Ravenshaw University odisha in collaboration with All India Association for Educational Research (AIAER).
Topic: Deflective Blogging by Women Teacher Educators: The Need of the Hour

PATENT

- Patent on LLM evaluation in filing process

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

- Member of the Core National Team involved in training counselors in Assisted Reproductive Technology in India
- Vice President of [Women Who Do Data](#)
- Ambassador of [WiDS](#) (Women in Data Science, originating out of Stanford University)
- Member of [Indian Fertility Society](#)
- Member of CPHR-Consortium for Psychological and Integrated healthcare Research
- Member of Indian Psychological Association

- Member Women in Machine Learning

PROFESSIONAL WORK FOR COMMUNITY ADVANCEMENT

- [Technical writer](#) at Towards AI
- Mentor at [Women in Analytics](#)
- University of Minnesota and University of Southern California (USC) students help with interview prep
- Animal fostering and helping rescues with data analysis
- Bhumi India (NGO) - taught robotics to students
- IETE Tech Gyan - tech news to all VIT students
- Science teacher at Rajrif Senior Secondary School

PARTICIPATION

2011

- Training program - robots manufacturing, VIT University

2013

- Represented Costa Rica in MUN (Model United Nations), VIT University

2009

- National Seminar on Teacher Education Curriculum at Army Institute of Education, New Delhi. Experts from NCERT (National Council of Education Research and Training) interacted with some school students on the theme.
- National Seminar on Right to Education - Problems and Challenges at Army Institute of Education, New Delhi. Represented Loretto Convent to interact with experts from NCERT (National Council of Education Research and Training) on social and emotional health of students from low income groups in inclusive education.

LETTERS/CERTIFICATE OF APPRECIATION

2015

- Letter of Appreciation from Vivekananda College of Education
- Certificate of Appreciation from Ford Motor Company for outstanding contribution as part of Global Caring Month

2014

- Manager of Synergy (National Level Technical Symposium), conducted by IETE, VIT University

2013

- IETE (Institution of Electronics and Telecommunication Engineers) Event Coordinator, VIT University

AWARDS

2016

- Asia Pacific Recognition Award, Ford Motor Company
- Ford India Graduation Certificate, Ford Motor Company

MEDIA PUBLICATION

2023

- Interviewed for expert opinion on raising awareness about potential implications and consequences of our technological reliance ([Link](#)) in Dainik Bhaskar which has a daily circulation of around 4.58 million.

TRAININGS CONDUCTED

2023

- 3 month training conducted on applications of AI and data science for budding mental health professionals