

BILWASIVA BASU MALLICK

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Summary

- AI Product leader & MBA candidate at The Ohio State University with **9+ years** of experience, spearheading product development lifecycle & launch of **39+ AI/ML products** at **Amazon** (Devices, AWS), **Oracle** OCI.
- Proven ability to define product vision, manage product lifecycle and lead high-performing, cross-functional teams
- Proficiency delivering low-latency, highly scalable solutions, driving customer engagement KPIs & profit margin.
- Eager to leverage deep expertise in Generative AI, LLM, technical software design to lead product innovation in Technical Product Manager, AI Product Manager, Engineering Manager, Technical Strategy Consultant positions

Education

The Ohio State University

Master of Business Administration (MBA) - STEM MBA (Finance, Product Management)

Columbus, Ohio

Aug 2025 – Apr 2027

BITS Pilani

Master of Engineering (ME), Bachelor of Engineering (BE) in Computer Science

Rajasthan, India

CS Dept Rank - 1st — CGPA: 9.6/10

Work Experience

Amazon

Feb 2021 – August 2025

Principal Applied Scientist / Senior Tech Lead

Bangalore, India

- Spearheaded product strategy & cross-functional execution of AI/ML initiatives across AWS, Amazon Pay, Kindle orgs.
- Defined product vision for 'Rec-Rainbow,' LLM-powered personalization Agentic AI, for session-aware recommendations; **led 15-member cross-functional team** of MLEs in **enhancing user dwell time by 53%, CTR by 44%** for Ads.
- GenAI Product Development: Owned roadmap for a multi-agent AI workflow on AWS Bedrock, leveraging Anthropic to accelerate task execution by 3X & revamped GenAI ecosystem in Amazon Pay automating queries for **70M** customers.
- Customer-Centric Solutions: Launched "HELIUM-PRISM," a multi-modal model that accelerated product mapping and ranking in Kindle and Prime Video, outperforming baseline models with **9X speed** & **14.5X** better memory efficiency.
- Technical Product Management: Directed end-to-end lifecycle for a Retrieval Augmented Generation (RAG) model for AWS Documentation, integrating Pinecone, Flan-T5 to streamline real-time query responses, achieving 87% BertScore.
- Introduced monthly recognition awards, quarterly hackathons to inspire path-breaking work in AI best practices in org.
- Innovated "HELIUM-PRISM", a robust lightweight multi-modal model, to accelerate product mapping & ranking in Kindle, Prime Video & promote de-duplication in digital catalog for **84 external competitors** across **3 continents**.
- Achieved performance of **98%** precision, **99%** recall for unmatched decision & **99%** precision for matched decision, outperforming baseline (VGG, ResNet, Inception, MobileNet, EfficientNet) with **9X speed** & **14.5X better memory**.
- Optimised model execution time by **250%** using EMR, enabling DCCS Org perform **0.3 Million** batch inferences daily.
- **Augmented Kindle purchase by 15%** with enriched catalogue, optimised price matching & generated high impact.
- Designed and deployed an automated promotion-monitoring system for retail webpages, achieving 99.6% accuracy in identifying product placements & **eliminating 2400+ hours** of manual validation work in Amazon Japan ecommerce.
- Evolved product-matching model Sherlock using hybrid of BERT & ELECTRA transformers, few-shot learning on text attributes for 6 GLs (ebook, music, video, podcast, app, games) & reduced onboarding time from **6 months** to **3 weeks**
- Built an online tag-generation model with BART for catalogue search intelligence with **93%** precision@10 & **0.85** MRR.
- Developed 9-class & 5-class classification models for entity & promotion texts & achieved **99%+ recall** & **95%** precision
- Orchestrated as **tech lead** of **16 SDE & MLE** in deploying model & CI/CD pipelines to production using SageMaker.
- Enhanced customer experience for **250 million** MiniTV users, improving asset utilization, lifting engagement by **21%**.
- Mentored 51 engineers, led talent development, change management for 7 teams establishing vision for AI product data.
- Authored **45 business cases** for 2024 annual strategic roadmap, with **12 product idea** PR/FAQs approved by VP-level leadership shaping technical product direction & Ops planning of **4** organizations [Retail, Devices, Prime Video, AWS].

Oracle

Jan 2019 – Jan 2021

Senior Applied Scientist / Product Lead

Bengaluru, India

- Pioneered **9M\$ worth** business tenets & team charter for a 16-member team in launching low-latency AI solutions
- Executed a 4-quarter strategic roadmap for next-gen automation platform spanning 5 business units, accelerating **25% faster time-to-delivery**, shortening release lead time from 16 to 7 weeks, mitigating go-to-market cycle time by **16%**.
- Managed the product backlog for 4 healthcare data verticals in Cerner healthcare org, **shipping 4 major features & 15+ enhancements** across **8 agile sprints**, contributing to a **\$20M Annual Recurring Revenue (ARR)** portfolio.
- Contributed to leading product milestones & critical phases of ML life-cycle across 4 core OCI verticals (Speech, Video, Language, Document) impacting **27k customers globally**, **enhancing annual customer retention rate by 18%**.

- Implemented full end-to-end product lifecycle for 9 enterprise-level document intelligence solutions, leading 16-member team Pinnacle in scoping, development, customized service delivery triggering acquisition of **42 international clients**.

Rakuten

Aug 2018 – Jan 2019

Research Scientist

Bengaluru, India

- Demonstrated ownership & responsibility to monitor telecom infrastructure using Computer Vision models, zeroing **90%** manual field inspection costs & **enabling 2.4X revenue growth** Key Performance Indicator (KPI) for business unit.

Cisco

Jan 2017 – July 2018

Software Development Engineer

Bengaluru, India

- Developed a predictive analytics framework to forecast network equipment failures in real-time for Cisco's Webex service, **improving system uptime availability by 78%**, preventing global service outages, **saving 1.8M\$ cost annually**.
- Created intelligent & lightweight online anomaly detection framework to monitor device health with **98.4% accuracy**.

Microsoft

Jan 2016 – Dec 2016

Research Fellow

Bengaluru, India

- Built real-time Brain Computer Interface to extract & classify target stimulus from EEG signals; performed real-time systems integration with NAO humanoid & built Choregraphe framework, curing ADHD, motor activities in healthcare.

Skills

AI/ML Product Strategy: Generative AI & LLM Productization, MLOps & Model Lifecycle Management, ML Design, Data Governance, Feature Store Roadmap, ML Infra Optimization, Modeling & Experimentation, AI Safety & Guardrails
Software Product Design: System Design Architecture, Scalability Reliability (SLAs, SLOs), Microservices, Scalability, API Lifecycle, Distributed Systems: Consensus, Load Balancing, Caching, Serverless Computing- Lambda, CI/CD Pipelines
Team Management: Mentorship, Talent Growth, Performance Evaluation, Recruitment, Resource Allocation, Coaching
Strategic Leadership: Client Handling, Planning, Organizational Change Management, Conflict Resolution, Negotiation
Product Strategy: Product Lifecycle Management, Product Roadmapping, Vision Crafting, Strategic Planning, Launch
Agile Tools: Scrum, Kanban, Sprint Planning, Backlog Grooming, Project Prioritization, Jira, Confluence, Trello, Asana
Cross-functional Collaboration: Stakeholder Management, Communication, Technical Decision-Making, Code Reviews
Business: P&L Management, Budgeting, Financial Modeling, Pricing, Revenue Growth, Cost Optimization, ROI Analysis
Functional: OKR/KPI Development, Product Analytics, Platform Strategy, Executive Storytelling, C-Suite Presentations
Risk Management: Risk Assessment, Risk Mitigation, Security, Regulatory & Data Compliance (GDPR, CCPA, HIPAA)
Customer Experience & UX Design: Research, UI/UX Principles, Wireframing, Prototyping, Usability Testing, UX Optimization, Interaction Design, Accessibility Standard, Design Thinking, A/B Testing, Engagement Metric: NPS, CSAT
Programming Languages: Python, C++, Java, Scala, C, R, JavaScript, TypeScript, React, Ruby, Perl, Golang, Kotlin
Databases Micro-services: SQL, NoSQL MongoDB, Cassandra, HBase, DynamoDB, Redis, Docker, Kubernetes, Neo4j
Tools: Distributed Computing- Spark, Hadoop, Flink, Dask; Tableau, Power BI, Databricks Snowflake, Git, GitHub, AWS, GCP, Azure, Kafka, Gemini, Perplexity, LlamaIndex, Hugging Face, Agentic AI, Deepseek, BigQuery, Terraform, Jenkins
ML Platform: PyTorch, TensorFlow, Keras, PySpark, scikit-learn, OpenCV, NLTK, MLflow, Databricks, Airflow, AutoML
Machine Learning: ML models & algorithms, Recommender system, A/B testing, Multi-Armed bandit, Ranking models, Probabilistic Models, Classification, Regression, SVM, Naive Bayes, Clustering, Reinforcement Learning, Causal Inference
Deep Learning: CNN, LSTM, BiLSTM, GAN, Transfer Learning, Optimization, Hyper-parameter Tuning, Transformers
Python libraries: pandas, numpy, scipy, scikit-learn, HuggingFace, statsmodels, optuna, gensim, spacy, langchain, openAI
Natural Language Processing: Word2Vec, GloVe, fastText; Transformers- BERT, RoBERTa, BART, XLNet, T5, GPT-4
Large Language Models (LLM): GPT-5, Falcon, Claude, Llama4, Alpaca, Vicuna, Mistral, Mixtral8x7B, ChatGPT, Phi
Gen AI Tools: SFT, IFT, PEFT, LORA, QLORA, RAG, RLHF, DPO, Langchain, Vector DB, MoE, Prompt Engineering
Managerial: Root Cause Analysis (RCA), Lean Six Sigma, Kaizen, Quality Assurance, Intellectual Property Management, Robotic Process Automation, Scenario Planning, Dependency Management, Retrospective Analysis, Workflow Automation
Business: Capacity Planning, Vendor Management, Executive Communication, Cost Analysis, Decision Making, Strategy
Leadership: Managing Technical Ambiguity, Operational Excellence, Technical Design Reviews, API Contract Definition, Versioning, Performance Management, Stakeholder Alignment, Career Development, Adaptability, Continuous improvement
AI: LLM Evaluation, Synthetic Data Generation, Knowledge Distillation, Model Quantization, Low-Latency Serving, ReAct
MBA skill: advanced Excel, financial modeling (DCF, LBO), Powerpoint, quantitative research, consulting, fintech strategy

Awards & Achievements

- Received **Amazon Employee of the Quarter award** 4 times across Prime Video, Music, Kindle orgs globally. **2024**
- Achieved the **2nd Prize** in ProdCon in entire India for pitching the prototype of my Think Big idea. **Nov, 2022**
- Awarded with the **First Prize** for my winning solution & implementation of tech idea- "Auto Generation of Video from Text" in **Amazon Hackathon'22** out of **300+ employees** & won **Think Big Award** for a business idea **June 2022**
- Won the **Star Performer Award, WOW Award & Budding Star Award** recognition in entire Org. **2021-2023**
- Felicitated with Swami Vivekananda Memorial Rashtriya Purashkar- **State Governor Award** for my Board results.
- Secured the **1st position out of 1 Million students** in **12th Board** exam with **99.2% [Rank- 1]** in entire WB state
- Secured the **4th position out of 1 Million students** in **10th Board** exam with **96.7% [Rank- 4]** in entire WB state
- Received KVPY scholarship & Performed within **top 1%** in National Astronomy, Physics, Chemistry, Maths Olympiads.