

# Akhil Uthappa

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## WORK EXPERIENCE

### Staples Inc.

*Software Engineering Intern- Machine Learning*

**Boston, MA**  
May 2023 - Sep 2023

- Engineered an analytics-infused logging system, improving the debugging time of Staples Center devices by 50%.
- Leveraged Spider dataset to create text to SQL LLM on Azure, saving 40% of manual query generation time for data engineers
- Developed the above POC leveraging Gen AI using Streamlit and Snowpark and conducted UX research post-approval.

### Boston University

*Machine Learning Research Assistant*

**Boston, MA**  
Jan 2023 - Present

- Analyzed External and Internal Drivers of US Mergers and Acquisitions (M&A) by Sector. The research paper published in EAI CSECS
- Conducted scalable clustering analysis with parallel training focusing on transactional structural patterns and interdependencies.
- Directed an ESG analysis project, applying regression and classification analysis, with natural language processing to evaluate sustainability scores for companies across diverse industries. The paper was presented and published in eM&Ai, the European M&A Institute.

### Mass General

*Machine Learning Research Assistant*

**Boston, MA**  
Jan 2023 - July 2023

- Worked with stakeholders to gather requirements, & design, develop, & test data pipelines from implementation to analysis. Conducted research to identify patterns.
- Implemented scalable classifiers for radiation-treated brain cancers, & optimized pipelines, for a 20% processing time reduction & improved report precision.

### Boston University

*Technical Fellowship for Innovative Research*

**Boston, MA**  
Sep 2022 - Dec 2022

- Developed a web 3.0 VR prototype for a collaborative application using C#, Unity, Open XR, and Solidity.
- Achieved a 20% faster product launch and improved project efficiency compared to other teams.

### Verloop.io

*Software Engineer II- Technical Project Manager,*

**Bengaluru, India**  
Sep 2021 - Mar 2022  
Jan 2020 - Sep 2021

*Software Engineer I*

- Implemented a Python monitoring and Jenkins-based release pipeline with Grafana and Sentry.
- Developed company-specific AI chatbots within a microservice design paradigm, incorporating CI/CD while leveraging Google Cloud services.
- Improved code and deployment guidelines for the entire team which improved debugging processes.
- Led a team of 3 engineers, reducing the development-to-deployment time by 60% via task delegation, team meetings, and code reviews.

### DesignString

*Software Engineer I*

**Bengaluru, India**  
Jul 2018 - Jan 2020

- Developed an aviation asset management platform with ML capabilities using Django. Extracted, Transformed, & Migrated large semi-structured data into structured formats (MySQL, PostgreSQL) for analysis and consumption.
- Automated database backup and encryption processes using Python and OpenSSL, integrating with AWS S3 for secure cloud storage, resulting in a 50% reduction in manual workload.

## LEADERSHIP EXPERIENCE

### Talkvert

*Co-founder and Chief Technical Officer*

**Bengaluru, India**  
April 2021 - April 2023

- Co-founded and led the development of a virtual stage platform, incorporating machine learning capabilities using Kotlin and Flutter.
- Managed cross-functional teams of developers & marketers, fostering collaboration to finalize product, while overseeing UI/UX design using Figma & Adobe XD.

## SKILLS

**Methodologies:** Object-Oriented Design Patterns, Software Engineering Principles, Agile Methodology, Scrum Framework, SDLC

**Programming Languages:** Java, Python, C++, C#, MATLAB, JavaScript (React, Node.js), HTML/CSS, R, Go

**Machine Learning and Cloud Analytics:** Regression & Classification, Predictive Modeling, TensorFlow, PyTorch, Apache Spark, Hadoop, AWS (EC2, EMR, RDS, S3, Lambda, Redshift, Athena, Glue), Databricks/Spark, PostgreSQL, SparkSQL, Pandas, PySpark, Airflow, GCP(Compute, Dataproc), Azure

**Web tech & Databases:** Django, FastAPI, Flask, REST API, SOAP API, Microservices, Apache Kafka, MySQL, PostgreSQL, MongoDB, Docker, Kubernetes

**Other Technologies and Tools:** Scrum, Agile, JIRA, Git, Unity, Open XR, VR Development, Tableau, Microsoft Excel, CI/CD, Version control

**Soft Skills:** Problem-Solving, Teamwork, Communication Skills, Adaptability, Time Management, Leadership, Project Management

## PROJECTS

### BU CollaborART

- Developed a collaborative art application VR game using C#, OpenXR, and Unity Game Engine.
- Identified issues faced by artists on using existing VR artistic applications using Agile Methodology.

### E-commerce ETL Data Warehouse

- Developed a robust e-commerce data warehousing solution using Python for data processing, PostgreSQL for database management, manipulation & extraction, PgEvent Scheduler for job scheduling, and Tableau for insightful data visualization and reporting dashboards.

### Distributed Deep Learning using TensorFlow

- Optimized a distributed DC GAN model on multiple clusters using TensorFlow for generating unique portraits, utilizing AWS SageMaker for scalable cloud computing and distributed training techniques to optimize performance.
- Created parallel training processes using Horovod to enhance processing speed and efficiency.

### Analyzing Remote Work Productivity

- Employed various classification algorithms such as Rpart, J48, KNN, Gradient Boosting, and Naive Bayes for an in-depth R-based analysis of remote work's impact on productivity."
- Integrated multiple attribute selection methods, including the Chi-Square Test, Recursive Feature Elimination (RFE), Gini Index, Information Gain, and ReliefF, to enhance the accuracy and relevance of productivity impact analysis.

## EDUCATION

**Boston University, Boston** *MS in Computer Science and Information Systems*

**Boston, MA**

**Coursework:** Distributed Systems, Advanced Machine Learning, Big Data & Analytics, Advanced DB Management, Data Mining, Data Science with Python, IT Strategy & Management, Business Data Communications, networks & Design, Project Management

**Visvesvaraya Technological University, Bachelor of Engineering, Computer Science**

**Bengaluru, India**

**Coursework:** Data Structures & Algorithms, Machine Learning, OOP, Software Engineering, Computer Networks, Database & Mgmt

## PUBLICATIONS & AWARDS

- [Published author for EAI Conference on Computer Science and Education in Computer Science EAI CSECS 2023.](#)
- [Published research in eM&Ai, the European M&A Institute.](#)
- Runner-Up representing India in the Great Wall Cup International Soccer Championship held in Beijing, China

## INTERESTS

Snowboarding, Sailing, Soccer, Gaming