

# YUVA KRISHNA THANNERU

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## EXPERIENCE

### Data Research Analyst | Northern Illinois University September 2024 - Present | Chicago, IL

- Designed a real-time data pipeline using **Azure Synapse Analytics** and **Apache Airflow**, processing 10,000+ Reddit posts daily to extract mental health insights, reducing data latency by 50% and enhancing research scalability.
- Built scalable **ETL** workflows integrating **PySpark** and **T-SQL** in Azure Synapse, optimizing structured and semi-structured data processing, leading to a 30% improvement in query performance and resource utilization.
- Analyzed user behavior and language patterns using **NLP** libraries like spaCy and NLTK, applying techniques such as **sentiment analysis** and **topic modeling** to identify early signs of mental health concerns in social media users.
- Implemented data governance by configuring **role-based access controls** (RBAC) within Azure Synapse and Azure Key Vault, ensuring compliance with university research ethics, HIPAA-like standards for handling sensitive data.
- Optimized large-scale queries using **partitioning** and **indexing** strategies within Azure SQL and Synapse, leading to a 25% improvement in query performance and cost efficiency.
- Developed interactive **Power BI** dashboards, integrating real-time health metrics from Azure Synapse, enhancing research trend visualization and accelerating decision-making for faculty-led studies by 36%.

### Teaching Assistant | Northern Illinois University Aug 2023 - May 2024 | Chicago, IL

- Mentored **70+** graduate students in Data Science and Analytics courses, providing guidance in SQL, Python, and ETL workflows, troubleshooting database workflows, debugging scripts, and improving project success rates by 20%.
- Developed automated grading workflows using **Alteryx**, streamlining SQL query performance assessments and data analytics projects, reducing manual grading time by 40% and ensuring standardized evaluation criteria for students.
- Led hands-on workshops on SQL-based ETL workflows, utilizing **MS SQL Server** and **SSIS** to demonstrate end-to-end data pipeline development, equipping students with practical database management skills and business automation.
- Facilitated hands-on **statistical modeling** labs, training students on **A/B testing** and **regression analysis** using Python for business **forecasting** and data-driven decision-making.
- Built interactive **Tableau** dashboards for faculty and students, enabling real-time tracking of coursework progress, research insights, and performance analytics, driving a 35% improvement in data-driven decision-making.

### Data Engineer | Wipro, Client: Citi Bank June 2020 - June 2022 | India

- Engineered a data warehousing solution in **Snowflake (EDW)**, managing over **10TB** of structured and semi-structured financial data, reducing query times by 40% and enhancing business intelligence capabilities.
- Developed and automated **ETL** pipelines integrating **AWS** services and Snowflake, streamlining data pre-processing, validation, and reporting workflows, reducing manual compliance reporting efforts by 35%.
- Managed 3-week sprints in a Scrum-based environment via **Jira**, prioritizing ETL automation, compliance reporting, risk assessments and **ad hoc** business requests, accelerating development cycles.
- Implemented **Agile** methodologies, including daily stand-ups, **backlog grooming**, and **sprint** reviews, ensuring seamless coordination across compliance, risk, and engineering teams, leading to a 25% reduction in project turnaround time.
- Performed Exploratory data analysis (**EDA**) over 1 million+ transactions of financial data using SQL and Python, uncovering compliance risks and enhancing reporting accuracy, minimizing payment-related defects by 18%.
- Engineered **SQL** based data **validation rules** and fraud detection queries, improving transaction risk monitoring and accelerating non-compliance identification by 30%.
- Generated advanced **MS Excel** dashboards with automated calculations, and features like **PivotTables**, **Power Query** and **VBA macros** to analyze and visualize financial metrics, improving reporting efficiency by 25%.
- Partnered with compliance officers, risk analysts, and project engineers to support **UAT** for compliance reporting, identifying and resolving 80% of discrepancies before production release, ensuring audit readiness.
- Mentored 10+ junior analysts and engineers in ETL automation, SQL performance tuning, Power BI visualization, and Lean methodologies, enhancing reporting processes and boosting overall team productivity by 36%.
- Developed **Power BI** dashboards to track onboarding trends, approval rates, real-time monitoring of compliance adherence and other financial **KPIs**, providing critical insights into transaction workflows.

## TOOLS & TECHNOLOGIES

**Languages:** SQL, Python, C/C++, HTML/CSS, Java

**Databases and cloud Tech:** PostgreSQL, MySQL, Microsoft SQL server, Oracle, AWS, Microsoft Azure, GCP

**Statistical Techniques:** Regression Analysis, A/B Testing, Hypothesis Testing, Time Series Analysis

**Tools:** MS Excel (VBA, pivot tables, macros, array functions), Tableau, Power BI, Snowflake, Alteryx, SAS

**Certifications:** Google Data Analytics Professional Certificate, AWS Solutions Architect Associate, **Power BI** Certification, **Snowflake** Snowpro Core Certification, Advanced **SQL** Certification (HackerRank)

## EDUCATION

**Masters in Computer Science, Merit Scholarship Student**

**Jan 2023 - May 2024**

*Northern Illinois University, DeKalb, IL*

*CGPA - 3.71/4*