

# Chinmaya Madhusudhan

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## Professional Summary

- Determined IT professional with 5+ years expertise in **data analysis, database administration** and **web development**.
- Strong hands-on experience in **Python, SQL, Power BI, Tableau, HTML, JavaScript** and back-end technologies.
- Proficient in transforming raw data into strategic intelligence through the design and deployment of interactive dashboards utilizing **Power BI** and **Tableau**, custom reporting tools, and automated work-flows.
- Skilled in writing **complex SQL queries**, stored procedures, and performance tuning for optimized data retrieval.
- Expertise in designing, and maintaining **relational databases** including **MySQL, Oracle, and SQL Server**.
- Developed full-stack web applications using **Flask, PHP, and JavaScript**, ensuring responsive and scalable UI/UX.
- Experience in **cloud platforms** including **Microsoft Azure , GCP** (Google Cloud Platform)and **AWS** (Amazon Web Services), with familiarity in deploying apps and managing resources.
- Adept at collaborating with **cross-functional teams** to gather requirements and deliver data-driven solutions aligned with business strategies and goals.
- Skilled in building and maintaining **ETL pipelines**, performing root cause analysis, and leading data migration initiatives from legacy systems to modern BI platforms like **Power BI and Tableau**.
- Experienced in integrating and analyzing data from **multiple enterprise systems** including **CRM, ERP, Google Analytics**, and third-party APIs, enabling unified performance tracking and enhanced decision-making.
- Demonstrated ability to work in **agile, cross-functional teams**, contributing to product development cycles, sprint planning, and continuous improvement of data infrastructure and reporting tools.
- **Authored** detailed **technical documentation**, standard operating procedures, and user guides to ensure continuity, scalability, and handover readiness.
- **Led root cause analyses and anomaly detection initiatives**, identifying operational inefficiencies and improving process performance by 12%.
- **Automated reporting and work-flows**, reducing manual effort by over 40% and improving data refresh cycles.
- Adept at developing **full-stack web applications** and designing scalable databases using **MySQL, PostgreSQL, Oracle, and SQL Server**, with deep understanding of **data modeling, normalization, and query optimization**.

## SKILLS

Programming Languages	Python, C, C++, Java
Web Technologies	HTML, CSS, Javascript, ReactJS
Frameworks	Bootstrap, Flask, Django
Database Technologies	MySQL, MongoDB, Oracle
Cloud Technolgies	Microsoft Azure, Google Cloud,Amazon Web Services
Version Control	Git, Github
Data Visualization	PowerBI, Tableau
Data Analysis	Open Refine, Trifacta, Numpy, Tensorflow, Pandas,Keras
Tools & IDE	VS Code, Pycharm, Eclipse, Anaconda

## Experience

### Data Analyst

- AG&E Structural Engenuity**, Dallas, TX 05/2024 to Present
- Collaborated with structural engineering teams to build and refine predictive analytic models for risk assessment, utilizing regression and classification techniques to flag vulnerabilities before a breakdown occurred.
  - Conducted root-cause analyses to identify trends and anomalies across engineering and operational data using Python,SQL and visualization tools, leading to a 12% process efficiency improvement.

- Defined and standardized data governance protocols, ensuring data consistency through clear documentation of version control, lineage tracking and compliance with industry standards.
- Led data-driven business reviews by consolidating Key Performance Indicators (KPIs) from multiple departments into interactive Tableau dashboards for faster and insight-driven decision-making.
- Spearheaded the complete overhaul of reporting work-flows by transitioning from Excel-based static files to an integrated SQL and Power BI architecture, reducing report generation time by 40%.
- Built ETL pipelines using Python and SQL to automate ingestion of large datasets from internal and external sources.
- Integrated disparate systems such as Google Analytics, CRM tools, and ERP data into a cohesive performance-monitoring dashboard, empowering leadership with a unified view of organizational metrics.
- Designed Power BI alert systems to notify stakeholders about KPI deviations, improving proactive management.
- Conducted correlation and hypothesis testing to validate assumptions and influence project planning strategies.
- Partnered with business analysts and engineers to translate data insights into actionable strategic recommendations.
- Developed APIs to expose curated data outputs to client-facing web applications using Flask.
- Presented monthly data deep-dives to senior leadership, improving data literacy across the organization.
- Designed maintained a data dictionary and metadata repository for better team alignment and onboarding efficiency.
- Collaborated with IT team to deploy analytic tools on Azure cloud infrastructure, ensuring scalability and security.
- Acquired, refined, and arranged unprocessed datasets from several platforms to facilitate examination.
- Enhanced the extraction of insights utilizing Excel and SQL to streamline data analysis for stakeholder reporting.
- Created data visualizations using tools like Tableau and Power BI to communicate trends and findings.
- Used Python and Excel macros to automate and standardize repetitive data tasks, saving valuable team hours weekly.
- Wrote detailed documentation of all data sources, processes, and work-flows for transparency and reproducibility.
- Addressed data quality issues by creating validation rules and establishing escalation processes with engineering teams.
- Supported experimental initiatives by analyzing A/B test results, helping to evaluate business strategies.

## **Data Analyst**

**Schoox**, Austin, TX

02/2023 to 05/2024

- Crafted high-performance SQL queries to sift through millions of records, uncovering user behavior patterns that improved customer segmentation and informed personalized marketing campaigns.
- Conducted churn analysis on B2B client usage trends, influencing product feature updates and retention strategies.
- Created automated data pipelines using Python (Pandas, Airflow) to support daily reporting and reduce manual effort.
- Collaborated with data engineering teams to clean, normalize, and structure data from PostgreSQL databases and third-party API sources, ensuring consistent inputs for BI dashboards and analytics models.
- Defined and monitored marketing funnel KPIs across campaigns, leading to a 20% uplift in qualified leads.
- Ran cohort analysis on user on-boarding behavior to identify optimal touch-points for feature discovery.
- Partnered with the sales team to develop a territory analysis tool, supporting data-driven resource allocation.
- Established quality checks and alerts on ETL pipelines to proactively detect data breaks and schema changes.
- Provided weekly insights to product managers on feature adoption, fueling agile sprint planning.
- Conducted A/B test evaluations to guide UI/UX decisions in the web platform and mobile app.
- Delivered monthly reports and dashboards to customer success teams, streamlining executive summaries for clients.
- Documented SQL scripts, assumptions, and BI logic in Confluence for team transparency and on-boarding.
- Supported migration of legacy Excel-based models to reproducible Jupyter Notebook workflows for analytics reuse.
- Developed and maintained dashboards in Tableau and Power BI to track various performance metrics.
- Wrote complex SQL queries to support in-depth ad hoc analyses and data manipulation across large datasets.
- Conducted data-driven investigations that influenced business decisions and improved process efficiency.
- Supported with custom SQL analyses for data-driven decision-making across marketing, and operations units.
- Implemented data validation steps across all reporting pipelines, improving the accuracy and reliability of KPIs.
- Developed Python scripts to, automate workflows, and prototype predictive models for exploratory use cases.
- Mentored analyst interns on data tools, statistical methods, and best practices for storytelling through data.
- Contributed to the development of a reusable data repository to improve data discoverability and reduce duplication.

## **Database Administrator**

**Tata Consultancy Services, Denver, CO**

10/2021 to 12/2022

- Supported the configuration, deployment, and routine maintenance of SQL and NoSQL database environments, ensuring secure and reliable data storage across multiple applications.
- Monitored database performance and availability using basic tools like SQL Server Management Studio, pgAdmin.
- Executed regular backup and restore processes with automated scripts and in-built to maintain data integrity.
- Administered user roles and permissions across databases in alignment with internal security protocols and compliance requirements, reducing risk exposure.
- Collaborated with developers to troubleshoot queries and implement strategies that enhanced performance by 20%.
- Participated in routine maintenance tasks, such as patching and upgrading database management systems.
- Developed and maintained detailed documentation covering database schema, user access procedures, backup strategies, and troubleshooting guides to support knowledge transfer and continuity.
- Participated in the implementation of monitoring solutions and alert systems that proactively flagged issues related to storage limits, performance bottlenecks, and downtime risks.
- Coordinated with the DevOps team to integrate database tasks into CI/CD pipelines and streamlining code deployment.
- Created basic procedures and triggers to automate recurring tasks, reducing manual workload and improving accuracy.
- Performed basic database tuning and configuration optimization under the supervision of senior Database Administrator's (DBAs) to ensure scalability and performance consistency.
- Assisted migration of databases to cloud-based platforms (AWS RDS / Azure SQL), contributing to modernization.

## **Web Developer**

**Volvo, Bangalore**

11/2019 to 09/2021

- Progressed from web development intern to full-time developer, demonstrating strong initiative and technical expertise across both front-end and back-end web systems.
- Designed and implemented scalable database schema and wrote efficient SQL queries to support dynamic website content, ensuring optimized performance and secure data handling.
- Managed web development responsibilities using HTML, CSS, JavaScript, PHP, and SQL to deliver responsive, cross-browser-compatible web applications.
- Developed, designed, tested, and launched marketing-focused landing pages tailored to product campaigns, which contributed directly to lead generation and a measurable uptick in customer engagement.
- Created and maintained SEO-optimized websites, implementing best practices in meta-tagging, image compression, and site speed optimization, leading to a 25% increase in organic traffic.
- Performed routine website maintenance tasks such as data imports, backups, logs using PHP scripts and mobile responsiveness, accessibility standards that enhance operational and user efficiency.
- Integrated third-party services such as Google Maps, reCAPTCHA, and payment gateways into dynamic PHP applications to enhance user interactivity and business functionality.
- Created detailed technical documentation for web applications, Application Programming Interface (APIs), and deployment procedures to streamline team on-boarding and ensure development continuity.
- Collaborated with cybersecurity teams to implement data validation, sanitization, and encryption techniques, reducing vulnerability to XSS, SQL injection, and other attacks.
- Maintained and updated legacy code-bases while gradually re-factoring modules to adopt modern development standards, improving maintainability and reducing bug frequency.

## **Data Privacy Intern**

**S.V.National Institute of Technology, Surat**

03/2019 to 10/2019

- Developed a privacy-preserving framework for sequential data publishing using the anonymization technique L-diversity and Mondrian splitting a partition method to mitigate privacy breaches in published datasets.
- Implemented various algorithms, processes and metrics to quantify and reduce privacy risks in sequential data publishing, particularly addressing the threat of incremental privacy breaches.
- Analyzed and cleaned large datasets with Python to create experimental setups to measure the impact of anonymization on data utility, privacy leakage, and adversarial re-identification risks
- Applied the k-anonymity model across multiple data releases and evaluated its effectiveness using real-world datasets, maintaining 95% data utility, ensuring minimal data distortion and greatly efficient.

- Demonstrated that the technique is resilient (100%) to Incremental Privacy Breach when applied to anonymized datasets, based on experimental results ensuring robust data security for sequential data publishing.
- Authored and submitted detailed technical documentation and visual reports, showcasing comparative results of baseline techniques versus the proposed solution resulting to data security enhanced by 30%.

## **Education**

**Masters in Computer Science** | University of Dayton, Dayton, OH

**Bachelor of Technology in Computer Science** | S.V.National Institute of Technology, Surat

## **Certifications**

- Autonomous Systems and Data Science
- Python