# ADITYA NITURE

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## EDUCATION

Illinois Institute of Technology, Chicago, IL, USA — Expected May 2025
**Master of Science, Computer Science**
Relevant Coursework: Artificial Intelligence, Machine Learning, Data Preparation and Analysis, Advanced Database Organization, Big Data, Design and Analysis of Algorithms.

M.S. Bidve College of Engineering, Latur, IN — May 2022
**Bachelor of Technology, Computer Science Engineering**

## SKILLS

- **Programming Languages:** Python, Java, JavaScript, SQL, Kotlin, Swift, TypeScript, R, C/C++, MySQL, Dart, HTML, CSS, MongoDB, Cassandra, Redis, MATLAB, Julia, PHP, Scala, C#, Rust, Go
- **Frameworks, Application Development & Web:** .NET, Tailwind CSS, React.JS, Node.JS, Vue.JS, Angular.JS, Spring/Spring Boot, Django, Flask, RESTful APIs, Next.JS, GraphQL, AJAX, Hibernate, Express.JS, Ruby, Android Development (Android Studio), iOS Development (Swift, Xcode), Dart, Flutter, Kafka
- **Data Science, Machine Learning & Big Data:** Deep Learning, NumPy, Pandas, Scikit-Learn, TensorFlow, Keras, PyTorch, RAG, NLP, Algorithm Development, SMOTE, Model Training, Predictive Maintenance, Data Visualization (Tableau, Power BI), PostgreSQL, SQL Server, Spark, Hadoop, Apache, Matplotlib
- **Cloud, DevOps & Tools:** Amazon Web Services (Lambda, S3, SQS), GCP, Azure, Docker, Kubernetes, Automation systems, Helm, Terraform, CI/CD Pipelines, Pulumi, Ansible, Edge Computing, GitHub, Bash Scripting, Linux Systems, TCP/IP, Airflow, Microservices, Test Bench Setups, System Configurations
- **Agile Development Methodologies:** Scrum, Sprints, Bamboo, Kanban Boards, Jenkin, Spinnaker, Confluence, Jira, Extreme Programming (XP), Agile Modeling

## WORK EXPERIENCE

**SOFTWARE ENGINEER INTERN**
Ping Cares, Chicago, IL — January 2025 - Present

- Spearheaded enhancement of mobile application using **Flutter**, introducing features that allow elderly users to set daily goals. Automated trivia updates, simplifying manual intervention by 40% and revising workflow efficiency, contributing to a **25% boost in user engagement** while ensuring accessibility standards.
- Revamped backend systems utilizing **Ruby**, succeeding a **15% reduction in API response times** and significantly improving reliability of critical services.
- Devised and executed advanced data processing pipelines and machine learning models to analyze wearable device data, enabling actionable insights for elder safety and wellness. These efforts enhanced predictive capabilities by **20%**, facilitating better monitoring and proactive interventions for critical health events.
- Boosted smartwatch usability by developing and deploying a real-time alert system for fall detection leveraging **gyroscope** and **accelerometer sensors**, **Python,** and **machine learning algorithms**. This innovation increased caregiver response efficiency by **30%**, ensuring timely interventions and improved elder safety.

**DATA ENGINEERING INTERN**
Swaraj Infotech, Pune, India — October 2021 - December 2021

- Devised a Python-based data pipeline, cutting data processing time **by 35%** and enabling quicker reporting and decision-making for government schemes.
- Strengthened data integrity by incorporating robust **validation techniques in MySQL**, attaining a **25% increase in data accuracy** and **reliability**, and designed dynamic, interactive dashboards with **Tableau** and **Power BI** to enhance stakeholder visibility and decision-making.
- Engineered an efficient data archiving solution using **Python** and **MySQL**, diminishing storage costs by **20%** while maintaining strict compliance with regulatory data retention policies, streamlining long-term data management and retrieval processes.
- Automated data management tasks with Python, significantly cutting down manual effort **by 40%** and freeing up the team to concentrate on key strategic initiatives.

## PROJECTS

**ONLINE SHOPPERS' PURCHASING INTENTION** — September 2024 - December 2024

- Analyzed online shopper behavior using machine learning models, including **Random Forest** and **XGBoost,** achieving a **15% increase in prediction accuracy** for purchase intention by addressing data imbalance through **SMOTE** and employing advanced feature selection techniques for optimal model performance.
- Performed unsupervised learning algorithms **K-Means** and **DBScan** to identify customer behavior clusters, leveraging **PCA** and **t-SNE** for dimensionality reduction and developing actionable visualizations of purchasing patterns, which led to a **20% improvement in customer segmentation insights.**

**LIVE NEWS FETCHING APPLICATION** — May 2024 - July 2024

- Engineered live news app with **Flutter** and **Dart**, integrating **real-time updates** from multiple sources and demonstrating expertise in Android development.
- Incorporated user-friendly features **search, bookmarks, and category-based retrieval** and **revamped UI performance** with libraries and image caching.
- Enhanced user experience through **smooth navigation, responsive design,** and **Android security features**, connecting to back-end services via **RESTful APIs** and applied **Git, OOP,** and **Agile methods.**

**MDA-EFSM GAS PUMP SYSTEM** — January 2024 - April 2024

- Developed and implemented a Meta-Data Augmented Extended Finite State Machine (MDA-EFSM) for a gas pump system, optimizing **dynamic payment** and **fuel type selection processes by 25%**, reducing transaction complexity, and **overhauling system scalability** for real-world applications.
- Designed and tested class structures for **multiple gas pump configurations (GasPump1 and GasPump2)**, achieving a **30% improvement in code modularity** and **reusability** by integrating payment methods**,** fuel type selection**,** and receipt generation using Object-Oriented Design principles and the Strategy Pattern.

**AIR QUALITY PREDICTION** — February 2024 - April 2024

- Created a high-accuracy air quality prediction system focused on PM2.5 levels, employing machine learning models such as **Random Forest, LSTM,** and **ARIMA.**
- Executed thorough **data cleaning** and **preprocessing techniques** to ensure high-quality inputs, elevating system's prediction accuracy by **15%**.

**HOTEL & CLUB MANAGEMENT** — April 2023 - June 2023

- Built a **full-stack web application** with **Java Enterprise Edition** and **Angular** for hotel and club management, streamlining operations and boosting overall efficiency by **30%**. Optimized database queries using **SQL** and **Hibernate**, enhancing data retrieval performance and decreasing server load by **20%**.
- Increased user engagement by **25%** through an intuitive**, responsive UI**, and revamped retention rates by **15%** with personalized offers and loyalty programs.

## CERTIFICATIONS

- IBM Data Science Professional Certificate — June 2024
- Full Stack Development from SEED Infotech — July 2023
- Java Core and Advance from Edu CADD — March 2021
- Python Bootcamp from Udemy — February 2021