

# Ramanathan Murugappan

M.E Mechatronics

2018 - 2020, Chennai

Anna University (M.I.T Campus)

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🐙 GitHub

🌐 LinkedIn

🎓 Scholar

## TECHNICAL SKILLS

**Languages and Frameworks:** Python, LangChain, Transformers, HTML, CSS, JavaScript, React.js, LaTeX, LamaIndex

**Data Science and ML Tools:** Pandas, Dask, Scikit-learn, Keras, Apache Airflow, Plotly, Selenium, PySpark

**Cloud and Databases:** AWS RDS, DynamoDB, BigQuery, MongoDB, MySQL, PostgreSQL, Qdrant

**ML Ops:** Docker, MLFlow, Kubernetes, Git, AWS Lambda, AWS EC2, Bash Scripting

**Dashboarding and Visualization:** AWS Quicksight, PowerBI, Matplotlib, Plotly, Seaborn

**IDE :** VS Code, Jupyter, Spyder, OpenDevIn

**Product:** Acquisition, Onboarding, Engagement & Retention, Monetization

**Areas of Expertise:** Data Science, Product Analysis , ML Ops, Generative AI Engineering

**Soft Skills:** Problem Solving, Self-learning, Presentation, Adaptability

## EXPERIENCE

### •Data Science Analyst

Aug 2021 – Present

Accenture AI-Hub / Global Consulting and Technology Company driving innovation in Data science

Bengaluru

- **Flipkart Lens** - Engineered Flipkart Lens using SAM for effective background removal and Clip-ViT for robust image embeddings, enhancing visual product searches.
- **GENAI Asthma Prediction Tool** - Engineered and led a GENAI asthma prediction tool project for a major healthcare client, integrating advanced data functionalities and enhancing client engagement through strategic presentations and collaborative development.
- **Google's Centralized Marketing Database** - Architected a centralized marketing database for Google, streamlining email campaigns by integrating data from multiple teams, reducing duplication, and enhancing data analysis.
- **Fee-Optimizing Model** - Developed a Plasma Donation fee-optimizing model, focusing on feature engineering and automated web scraping for data collection.
- **Unstructured Data Extraction Package** - Created an unstructured data extraction package, transforming .docx Form documents into structured key-value pairs.
- **Vaccine Impact Analysis** - Analyzed the dengue vaccine's impact in Indonesia, developed a centralized metrics database, and designed PowerBI dashboards, enhancing decision-making. Collaborated with Field sales teams to understanding of Impact.

### •Data Science Analyst

Dec 2019 – Aug 2021

Kaleidofin / Series B FinTech Startup serving the Underbanked Space, backed by BHARAT Inclusion

Chennai

- **Credit Risk Model** - Developed a Credit Risk model using Bagging and Boosting for risk assessment, analyzing transaction, demographic, and credit data.
- **Payment Prediction Model** - Built a payment prediction model utilizing RandomForest, LightGBM, and Grid-SearchCV for hyperparameter tuning, improving efficiency in call center operations.
- **Dashboards & Database Automation** - Designed and deployed customized dashboards and automated workflows with Apache Airflow, integrating various data sources.

## GROWTHX CAPSTONE EXPERIENCE

### •GrowthX Capstone Program - 📌View Growth Strategy

A chatbot capable of responding to queries based on a user's resume, deployed as a web application.

Mar 2024 - present

- Participated in an intensive immersion program with 300 members, aimed at scaling companies at different growth stages, covering acquisition, onboarding, engagement&retention, and monetization in 4 weeks with POW.
- Qualified among 100 members to build capstone projects, forming a diverse team to tackle the problem statement: "Increase the revenue of Blue Tokai from ₹250 crore to ₹500 crore within 12 months."
- Developed a comprehensive strategy involving market expansion, customer loyalty enhancement, pricing optimization, and leveraging digital marketing to achieve the revenue target.
- Advanced through multiple elimination rounds, where 13 teams were shortlisted to 5, and finally to the top 2 after 3.5 weeks of rigorous work and iterative feedback.
- Won the GrowthX Capstone by presenting our strategy to a distinguished panel on Demo Day, including over 1,000 industry professionals, and secured first place. - Achievement
- Presented the winning strategy to Blue Tokai's Founder, Matt Chitharanjan, and Co-Founder, Shivam Shahi, who expressed keen interest in implementing 80% of our strategic recommendations.

## PERSONAL PROJECTS

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### •Resume Chatbot - Access the Bot

*A chatbot capable of responding to queries based on a user's resume, deployed as a web application.*

- Enables users to interact with the chatbot to learn more about a resume, simulating interview-like questions.
- Used Google Generative AI (LLM) and deployed using Flask for the backend and React.js for the frontend.
- Used Docker for containerization and deployment, ensuring consistency across different environments.
- Technology Used: Python, React.js, Flask, Shadcn CSS, Docker, Render for deployment.

### •Two-Stage Predictive ML Engine for Flight On-time Performance - GitHub

*A machine learning engine that forecasts on-time performance of flights using weather data in the US.*

- Developed a two-stage predictive model employing supervised machine learning algorithms.
- The first stage performs binary classification to predict the occurrence of flight delays.
- The second stage uses regression to predict the delay duration in minutes if flight is delayed.
- Technology Used: Python, Scikit-learn, Pandas, NumPy, Matplotlib.

## PUBLICATIONS & RESEARCH PAPERS

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### •A Two-Stage Machine Learning Approach to Forecast the Lifetime of Movies in a Multiplex - Springer

*Published at Future of Information and Communication Conference (FICC) 2020, San Francisco, USA*

- Two-stage solution using machine learning to predict if a movie would proceed to be screened in the following week and the number of weeks it would continue to be screened if it does.

### •User-Independent Human Stress Detection - IEEE Xplore

*Published at IEEE Intelligent Systems IS'20, Varna, Bulgaria, August 2020*

- User-independent classification model for human stress identification, where a new user requires no prerequisite calibration of their affective state. The classification of affective states was carried out on the publicly available dataset WESAD.

## CERTIFICATIONS

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**Advanced Analytics for Data Scientists:** Workera - View Credential

**Skills:** Business Analytics, Data Mining, Machine Learning

**Cloud Computing for Data Scientists:** Workera - View Credential

**Skills:** Amazon Web Services (AWS), Cloud Computing

**Data Scientist Core I v3 :** Workera - View Credential

**Skills:** AI Explainability, Probability, Statistics, Machine Learning, ChatGPT

**Data Scientist Core II v3:** Workera - View Credential

**Skills:** AI Fairness, Data Structures & Algorithms, Mathematics for AI, Generative AI

**Data Scientist Core III v3:** Workera - View Credential

**Skills:** AI Accountability, AI Reliability, Deep Learning, Software Engineering Foundations

**Responsible AI:** Workera - View Credential

**Skills:** AI Accountability, AI Explainability, AI Fairness, AI Reliability

**Introduction to Cloud Computing:** Coursera - View Credential

**Skills:** DevOps, Cloud-Native Applications, Cloud Computing

**Introduction to Web Development with HTML, CSS, JavaScript:** Coursera - View Credential

**Skills:** HTML5, HTML, Cascading Style Sheets (CSS), JavaScript, Git, Web Development

**Google Analytics Certification:** Google - View Credential

**Skills:** Google Analytics, Data Analytics, Analytics, Data Analysis, Data Science

**Red Hat Certified Specialist in OpenShift Administration:** Red Hat - View Credential

**Skills:** OpenShift, Docker, Kubernetes, Container Orchestration, Containers

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