



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:05-11-2024

Department	COMPUTER SCIENCE AND ENGINEERING	Application No.	20240138
Area of Research	AI/ML	Research Mode	PART TIME

Name :BAKKIYARAJ K M
Date of Birth / Age :11-08-1981 / 43 Years
Gender :MALE
Category :BC
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Mobile :+12039191749



Father's/Husband's Name	MALAMUTHU	Father's/Husband's Occupation	NA
Family Income	225000	Residential Type	RURAL
Birth Place	CUDDALORE	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	MARRIED
Aadhaar No.	6801 5227 9020	PAN No.	AKVPM9345B
Physically Challenged	NO	Type of Disability	-
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Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
BE	INFORMATION TECHNOLOGY	PSR ENGG COLLEGE/MADURAI KAMARAJ UNIVERSITY	2003	80.1	DISTINCTION	REGULAR
HIGHER SECONDARY	STEM	HIGHER SECONDARY BOARD	1999	79	FIRST	REGULAR
MATRICULATION BOARD	STEM	SECONDARY	1997	78	FIRST	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature
MORGAN STANLEY	VICE PRESIDENT	2024-09-09	2024-11-04	BUSINESS ANALYSIS, DESIGN AND ARCHITECTURE
ONEDOTSIX CONSULTING INC	SOLUTIONS ARCHITECT	2022-05-26	2024-09-06	BUSINESS ANALYSIS, DESIGN AND ARCHITECTURE

ACMESOFT GLOBAL INC	SOLUTIONS ARCHITECT	2021-10-27	2022-05-22	BUSINESS ANALYSIS, DESIGN AND ARCHITECTURE
HCL AMERICA INC	GROUP BUSINESS MANAGER	2019-01-07	2021-10-21	BUSINESS ANALYSIS, DESIGN AND ARCHITECTURE

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
20240138_241107201612	ZHD1NO004HZ4NM	07-11-2024	600	SUCCESS

Ph.D - Research Proposal

Building Counter Party Library for Anti-Money Laundering Detection

Introduction

In the Financial Crimes Technology, it has become imperative that there needs to be effective monitoring mechanism to find relationship between customers of financial institutions and the counterparty they are involved with. This establishes lots of hidden possibilities to identify effective Customer Risk, Network of relationships between different entities effectively. A core aspect of AML detection lies in monitoring and analyzing financial transactions for suspicious patterns, often linked to money laundering activities. One of the key challenges in this process is the identification of high-risk counterparties involved in potentially illicit transactions. Building a comprehensive Counterparty Library (CPL) that integrates both structured and unstructured data can significantly enhance the detection of such activities.

Problem Statement

Despite the advancements in transaction monitoring systems, financial institutions still face challenges in accurately identifying and assessing counterparties involved in money laundering activities. Current AML systems often struggle with incomplete or inconsistent counterparty data, leading to false positives, missed connections, or ineffective risk assessment. Without a well-curated Counterparty Library, which aggregates various data points like transaction histories, geographical data, industry specifics, and more, detecting complex laundering schemes remains inefficient and prone to error.

Data Collection:

The initial phase will focus on collecting relevant data from financial institutions, regulatory bodies, and other trusted sources. This includes transactional records, entity identifiers, geographical risk factors, and historical risk assessments

Objectives

- Develop a comprehensive Counterparty Library (CPL) that centralizes data from multiple sources to enhance the identification and analysis of high-risk entities.
- Integrate risk scoring mechanisms to evaluate counterparty risk using historical transaction data, financial profile, jurisdictional risks, and related parties.
- Improve the accuracy and efficiency of AML detection by providing a robust database of counterparties with real-time risk assessment tools.
- Facilitate improved reporting for regulatory bodies by providing detailed counterparty profiles that aid in suspicious activity investigations.

Preliminary Analysis

Risk Scoring

Counterparties will be evaluated based on established risk indicators such as the volume of transactions, jurisdictions involved, past legal violations, and network connections with high-risk entities. Machine learning algorithms will be leveraged to automate this scoring system.

Data Integration and Matching:

A key aspect of the CPL will be integrating data from diverse sources, ensuring accurate entity matching, and flagging potential risks based on past transactional behavior and relationships with known suspicious entities.

Methodology

Data Acquisition:

Gather data from public and private sources, including financial transactions, regulatory filings, and KYC (Know Your Customer) profiles.

Risk Scoring Algorithm: Develop a dynamic scoring model using machine learning to rate counterparty risk based on factors like transaction patterns, geographical location, legal risk, and associated networks.

CPL Database Development:

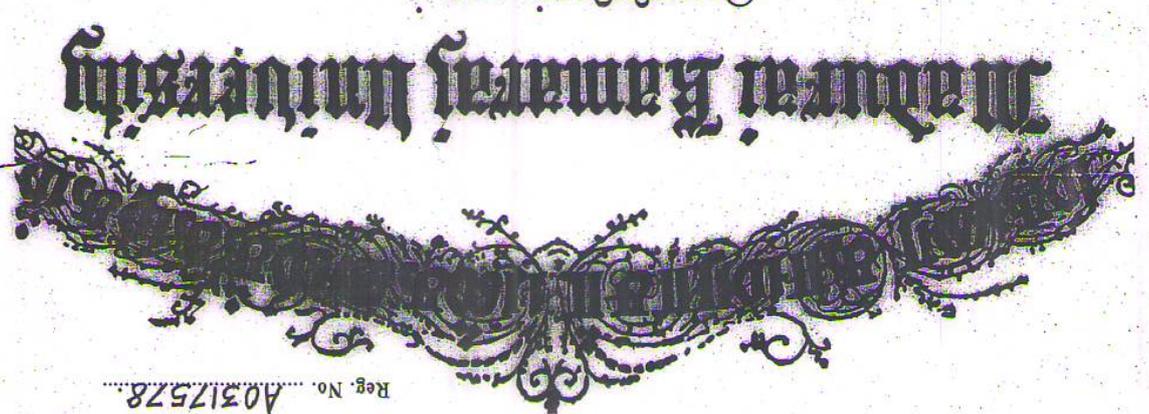
Create a centralized, searchable library where counterparties are categorized, and their associated risks are updated in real-time.

Testing and Validation:

Use historical case studies and real-world data to test the effectiveness of the Counterparty Library. Evaluate the accuracy of risk assessments and the reduction of false positives in AML detection systems.

Conclusion

The proposed Counterparty Library for Anti-Money Laundering Detection will significantly enhance the effectiveness of AML systems by providing a robust, real-time, and data-driven framework for assessing counterparty risk. By centralizing relevant information, automating risk assessment, and enabling better identification of high-risk entities, the CPL will help financial institutions comply with regulatory requirements and better protect the financial system from illicit activities. Furthermore, this system could contribute to the broader fight against financial crime by offering a scalable solution that adapts to emerging trends in money laundering activities.



Madurai Kamaraj University

மாநகராஜ் பல்கலைக்கழகம்

FACULTY OF ENGINEERING

பல்கலைக்கழகப் பரீட்சைக்கமிட்டி

பரீட்சைக்கமிட்டி தலைவர் பி. சி. சிவசுப்பிரமணியன் அவர்கள்

பல்கலைக்கழகப் பரீட்சைக்கமிட்டி தலைவர் பி. சி. சிவசுப்பிரமணியன் அவர்கள்

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The Senate of the MADURAI KAMARAJ UNIVERSITY

herby makes known that Baskiyaraj & M

has been admitted to the Degree of Bachelor of Engineering

he she having been certified by duly appointed Examiners to be

qualified to receive the same and having been placed by them in

the First Class in Information

at the Examination held in Technology

April 2003

Given under the seal of the University.



பல்கலைக்கழகப் பரீட்சைக்கமிட்டி
மதுரை, Madurai - 625 021.
Dated 20th OCTOBER 2008

பதிவுரை
Registrar

கிணைவேந்தர்
Vice-Chancellor



Folio No. :

Date 12 JUN 2003

PROVISIONAL CERTIFICATE

REG. NO.
A0317578

This is to certify that **BAKKIYARAJ K M**

has qualified for the Degree Of **BACHELOR OF ENGINEERING**
INFORMATION TECHNOLOGY

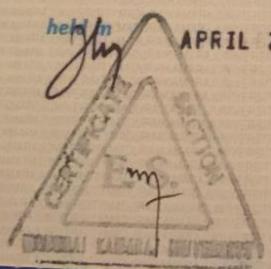
He / She having passed the final Examination

held in **APRIL 2003**

in

FIRST Class
WITH DISTINCTION

CENTRE
516



[Signature]
ASST / DEPUTY REGISTRAR

[Signature]
DR T JOHN SAHAYAM CHELLIAH
CONTROLLER OF EXAMINATIONS

HCL AMERICA, INC.

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EXPERIENCE LETTER

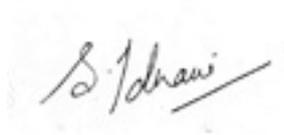
TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. BAKKIYARAJ KANTHIMATHI MALAMUTHU**, Employee code 51780839 was an employee of **HCL Group** from **Jan 14, 2019** till **Oct 27, 2021**.

As per our records, his last assignment was with **HCL AMERICA INC.** from **Nov 28, 2019** till **Oct 27, 2021** and his last designation at the time of exit from the company was **GROUP BUSINESS SPECIALIST**.

We wish **BAKKIYARAJ KANTHIMATHI MALAMUTHU** all the best in his future endeavours.

For HCL AMERICA INC.



Authorized Signatory

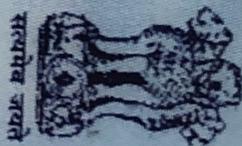
Date: Feb 21, 2022

This is a computer-generated document and doesn't require a company seal.

HCL

आयकर विभाग

INCOME TAX DEPARTMENT



भारत सरकार

GOVT. OF INDIA

BAKKIYARAJ MALAMUTHU

MALAMUTHU KANDHIMATHIPILLAI

08/11/1981

Permanent Account Number

AKVPM9345B

Signature



11012013

India Driving Licence(Tamilnadu)
Form 7
DOI 09/03/2009



D.L.No : TN72 20090001989
Name : BAKKIYARAJ KM
S.D.W of : MALAMUTHU PILLAI
Address :
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PALAYMKOTTAI
TIRUNELVELI 627002
Temp Add:
VIGNESH DRIVING SCHOOL
D.O.B : 08/11/1981 B.G :

Punishments



Licensed to drive throughout India, vehicles of the following descriptions
M/CYCL.WG 09/03/2009 TN72 LMV 09/03/2009 TN72

Non-Transport Veh Valid upto 08/03/2029


Signature L.J.J.
of the Holder





Government of Tamil Nadu
தமிழ்நாடு அரசு

படிமம் எண். 5

Department of Municipal Administration & Water Supply

BIRTH CERTIFICATE (TRANSLATED VERSION) - பிறப்பு சான்றிதழ்
(Issued Under Section 12(1) of the Registration of Births and Deaths Act, 1969 and Rule 8 of Tamil Nadu Registration of Births and Deaths Rules 2009)

This is to Certify that the following information has been taken from the original record of Birth which is in the register for (local area)
Division (01), CUDDALORE MUNICIPALITY
CUDDALORE of District CUDDALORE
of State TAMILNADU.

கீழ்க்கண்ட தகவல்கள் தமிழ்நாடு யாழ்ப்பாணம்
யாழ்ப்பாணம் உடலுள் வட்டம்

பிரிவு எண் 01, உடலுள் நகராட்சிமன்றம் சேர்ந்த
அரசு பிறப்பும் பதிவேட்டிலிருந்து எடுக்கப்பட்டவை என சான்றிதழ் வழங்கப்படுகின்றது.

Name / பெயர் : BAKKIYA RAJ K.M.
Sex / பாலினம் : MALE
Date of Birth / பிறந்த தேதி : 08/11/1981
Place of Birth / பிறந்த இடம் : JANAKI NURSING-HOME
NELLIKUPPAM ROAD
CUDDALORE
Name of Father / தந்தையின் பெயர் : MALAMUTHU PILLAI
Name of Mother / தாயின் பெயர் : MEERA BAI



Registration No / பதிவு எண் : 964/1981/01
Date of Registration / பதிவு தேதி : 13/11/1981

Date of Issue / வெளியீடு : 28/11/2016
Municipal Health Officer, Cuddalore Municipality
Signature and Address of Issuing Authority
சான்றிதழ் அளிப்பவரின் கையெழுத்து
Seal / முத்திரை

ENSURE REGISTRATION OF EVERY BIRTH AND DEATH



Folio No. :

Date 12 JUN 2003

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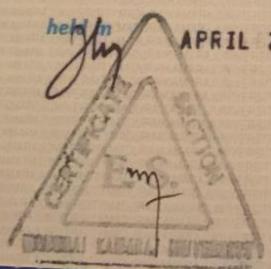
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