

Ashish Upadhyay

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| CONTACT INFORMATION | 126 Auchinyell Road Aberdeen United Kingdom AB10 7EB | <i>Contact:</i> 1716293@rgu.ac.uk, +44-7427970754 <i>Google Scholar:</i> Ashish Upadhyay <i>LinkedIn:</i> https://linkedin.com/in/ashishu007/ <i>GitHub:</i> https://github.com/panditu2015 |
| RESEARCH INTERESTS | Case Based Reasoning, Knowledge Modelling, Machine (& Deep) Learning, Natural Language Processing, Text Mining. | |
| EDUCATION | DSPM-International Institute of Information Technology , Naya Raipur (IIIT-NR), India B.Tech, Computer Science and Engineering, May 2019 - Expected (88.2%) DAV Public School , Moonidih - Dhanbad, Jharkhand, India Intermediate - AISSCE, May 2015 (93.8%) Toolika Public School , Ghazipur, Uttar Pradesh, India Matriculation - AISSE, May 2013 (9.8 CGPA) | |
| TECHNICAL ABILITIES | <ul style="list-style-type: none">• Languages: Python (Full-Stack), R, SQL, Java, C/C++, JavaScript.• Machine Learning Frameworks: NLTK, Scikit-learn, Pandas, Matplotlib, NumPy, OpenCV.• Deep Learning Frameworks: Keras, Tensorflow.• S/W Development: AWS, Flask, SQLAlchemy, PostgreSQL, React.js, UML, ThingSpeak.• NLP: Information Extraction and Retrieval, Knowledge Modelling, Linked Data.• Operating Systems: Windows: 7/8/10; Linux Distros.: Ubuntu, Kali. | |
| PUBLICATIONS | Shrivishal Tripathi, Ashish Upadhyay , Shashank Kotyan, and Sandeep Yadav. “ <i>Analysis and Comparison of Different Fuzzy Inference Systems Used in Decision Making for Secondary Users in Cognitive Radio Network.</i> ” <i>Wireless Personal Communications</i> (2018): 1-34. [DOI] Ashish Upadhyay , Kushashwa Ravi Shrimali, Anupam Shukla, “ <i>UAV-Robot Relationship for Coordination of Robots on a Collision Free Path</i> ”, <i>Procedia Computer Science</i> , Volume 133, 2018, Pages 424-431, ISSN 1877-0509. [DOI] Ashish Upadhyay , Vimal Anand Baghel, Eleftherios Kousis, Stewart Massie, “ <i>A Case-Based Reasoning Approach for Prioritizing Regulatory Documents in Oil and Gas Industry</i> ”, Submitted in ICCBR 2019. Thanh Nguyen, Ashish Upadhyay , Vimal Anand Baghel, Stewart Massie, “ <i>Deep Learning Based Ensemble of Base Machine Learning Algorithms</i> ”, Manuscript under preparation. | |
| SCHOLARSHIPS | Studentship at RGU: £1231 per month to support my expenses during final semester internship. Studentship at RGU: £1000 per month to support my expenses during summer internship. | |
| RESEARCH INTERNSHIPS | Robert Gordon University (RGU) , Aberdeen, United Kingdom A CBR Approach for Prioritizing Regulatory Documents in Oil and Gas Industry <i>Guide:</i> Dr. Stewart Massie, Senior Research Fellow, RGU December 2018 - Present <ul style="list-style-type: none">- Devised a mechanism for prioritizing a pile of Oil and Gas Equipment Maintenance Documents based on their source and domain-specific keywords present in it.- Proposed a requirement of a minimum number of annotated documents to gain reasonable accuracy from the classification model.- Paper submitted in ICCBR 2019. Robert Gordon University (RGU) , Aberdeen, United Kingdom Application of Machine Learning and Optimization in Supply-Chain Management <i>Guide:</i> Prof. John McCall, Head of CSDM School, RGU May 2018 - July 2018 <ul style="list-style-type: none">- Developed an algorithm for the automation of tasks for creating jobs of picking items from different places in Scotland and minimizing the number of trucks used. | |

- Developed an API using Flask and Vue.js. Used Sklearn and Pandas for implementing the Clustering and Bin Packing Algorithms.

National Informatics Centre (NIC), Chhattisgarh, India

Pronunciation Similarity Matching using Deep Learning

Guide: Dr. Muneendra Ojha, Asst. Professor, CSE, IIIT-NR **August 2018 - December 2018**

- Developed a Client-server model for pronunciation matching to be used by the students to improve their English pronunciation by practicing.
- Extracted the MFCC features from speech signal and converted the speech signal into a 2D image. Used that image to train a CNN model in Keras and Tensorflow.

Indian Institute of Information Technology & Management, Gwalior (IIITM-G), India

UAV-Robot Relationship for Coordination of Robots on a Collision Free Path

Guide: Prof. Anupam Shukla, Professor, ICT, IIITM-G

December 2017

- Developed an algorithm using **A*** and **PRM** for the coordination of multiple robots on a collision free path using the bird eye view of an UAV. [\[Published Paper\]](#).

ACADEMIC
PROJECTS

Twitter Sentiment Analysis of the Policies of Modi Government

- Used **Distant Supervision** for dataset creation. Collected around 1M tweets on the various topics like GST & Demonetization. Labeled them in three classes (positive, negative & neutral).
- Used Unigram technique for feature extraction. Library Used **NLTK**. [\[GitHub\]](#)

Handwritten Character Recognition of Devnagri Letters using Deep Learning

- Recognized Handwritten Devnagri Characters using CNN on a dataset from [UCI Machine Learning Repository](#). Classified characters into 46 classes. [\[GitHub\]](#)

Coordination of Intelligent Agents on a Pre-Defined Path using A* and PSO

Guide: Dr. Muneendra Ojha, Asst. Professor, CSE, IIIT-NR **August 2017 - November 2017**

- Developed an algorithm for multi-agent coordination using A* and PSO. Extended this project to implement the developed algorithm in real world. Simulated the algorithm in Gazebo. [\[GitHub\]](#)

Analysis of Different FISs used in Decision Making for Secondary Users in CRN

Guide: Dr. Shrivishal Tripathi, Asst. Professor, ECE, IIIT-NR

January 2017 - April 2017

- Compared Mamdani and Sugeno FIS for 13 input parameters and 6 output parameters for different input and output Membership Functions using Fuzzy Logic.
- Mathematically proved the correlation between the different FISs. [\[Published Paper\]](#).

EXTRA-CURRICULAR
ACTIVITIES

- **Member of Core Team:** Technovate 2018 (Techno-Cultural Fest of IIIT-NR).
- **Member of Organizing Team:** Industry-Academia Meet 2017, IIIT-NR.
- **Head Organizer:** Connaissance 2016 (Literary cum Cultural Fest of IIIT-NR).
- **Member of Mess Committee:** Raman House, IIIT-NR (January 2016 - August 2017).
- **2nd Runner-up:** Breaking Bugs, Technovate 2017 (Code De-Bugging Competition).
- **Best Delegate:** Divya Jyoti National Youth Parliament 2017, Raipur.

REFERENCES

Prof. John McCall

Head of School, CSDM
Robert Gordon University, Aberdeen
United Kingdom
E-mail: j.mccall@rgu.ac.uk

Dr. Stewart Massie

Senior Research Fellow, CSDM
Robert Gordon University, Aberdeen
United Kingdom
E-mail: s.massie@rgu.ac.uk

Dr. Muneendra Ojha

Assistant Professor, CSE
International Institute of Information Technology,
Naya Raipur, India
E-mail: muneendra@iiitnr.edu.in