

Amit Kumar Jaiswal

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EDUCATION

University of Bedfordshire
England, United Kingdom
PhD • Apr 2018 - July 2021
Quantum Information Retrieval
Funded by MSCA EU H2020 Fellowship

University Institute of Engineering
& Technology, CSJM University
Kanpur, India
BTech • Aug 2013 - June 2017
Computer Science & Engineering

CERTIFICATIONS

Mathematics for Machine
Learning
Imperial College London
Coursera • April 2020

Introduction to Deep Learning
(Honors)
National Research University Higher
School of Economics, Russia
Coursera • March 2019

Text Retrieval & Search Engines
University of Illinois at
Urbana-Champaign
Coursera • May 2019

COMPUTING SKILLS

Programming Language
C/C++ • Python • Bash • Scala • Perl

Cloud/AIOps Platform/Stack
GCP/AWS •
Kubernetes/OpenShift/Openstack •
Kubeflow • RAPIDS.ai • H2O.ai

Framework
Tensorflow/PyTorch • OpenCV •
LaTeX • GitHub/Gerrit • Elasticsearch •
Apache Spark

Operating System
Linux • Windows • MacOS

LINKS

amitkumarj441.github.io
kaggle.com/amitkumarjaiswal
github.com/amitkumarj441
linkedin.com/in/amitkumarjaiswal1

HONORS & AWARDS

Full grant - Alan Turing Hackathon,
Sept 2019
Alan Turing Institute, London
Full grant - Alan Turing Hackathon,
Aug 2019
University of Bristol, United Kingdom

EXPERIENCE

University of Leeds, England
Research Software Engineer • Jan 2021 - Present
- Developing and packaging the state-of-the-art multivariate extreme value/machine learning models for financial use-cases (synthetic financial data generation, lending etc.) including a Pythonic API.
- Tech Stack: Python, FastAPI, Docker, K8s, React

University of Bedfordshire, England
Marie Curie Researcher • Apr 2018 - Dec 2020
- Developing quantum-inspired deep neural network for interactive search that leverages cognitive theory of Information Foraging.

University of Padova, Italy
Visiting Researcher • Apr 2019 - June 2019
- Worked on applying Quantum IR techniques in image search tasks.
- **Mentor:** Prof. Massimo Melucci

Quanonblocks LLP, New Delhi, India
Co-Founder & Chief Technology Officer • Sept 2017 - Mar 2018
- Lead tech team and outsourced open source decentralized applications for over 10 global clients. [Generated revenue \$2M]

Open Mainframe Project - Linux Foundation
Summer Intern • Jun 2017 - Sep 2017
- Enabled OpenStack support for z/VM
- Benchmarked OpenStack functions and support matrix features [Blog]
- **Mentor:** Kevin (Ji) Chen, **Co-mentor:** Emily Hugenburch

Cloud Native Computing Foundation - Google Summer of Code
Developer Intern • May 2017 - Aug 2017
- Created and implemented a data model to standardize Kubernetes logs [Blog]
- Tech stack: OpenShift, Kubernetes, Elasticsearch, Ruby, Fluentd, Kibana [1]
- **Mentor:** Miguel Perez Colino, **Co-mentor:** Richard Megginson

CapitalVia Global Research LTD, Indore, India
Software Engineering Intern • June 2016 - July 2016
- Built a scalable web application for Visitor Management System [2] in PHP and JS.
- Developed a scalable web app for Courier Management System [3] in PHP and JS.
- **Mentor:** Rohit Gadia

SuperProfs, Bangalore, India
Product Developer Intern • Jun 2015 - Jul 2015
- Responsible for product development and quality assurance of IIT-JEE exam contents.

Indian Institute of Management Ahmedabad (IIM-A), India
Campaign Associate • May 2015 - June 2015
- Responsible for creation and translation of Educational videos
- Acted as a lead developer of initiative "Scholars for Change"

Centre for Monitoring Indian Economy, Mumbai, India
Research Analyst • Mar 2015 - Apr 2015
- Analyzing and quantification of household data of Consumer Pyramids using time series - Normalized Consumer Pyramids data.
- **Mentor:** Aditi Kadam

PUBLICATIONS

Semantic Hilbert Space for Interactive Image Retrieval, IN PROCEEDINGS OF THE 2021 ACM SIGIR INTERNATIONAL CONFERENCE ON THE THEORY OF INFORMATION RETRIEVAL (ICTIR) • 2021
Amit Kumar Jaiswal, Haiming Liu, Ingo Frommholz

Conference grant - Search Solutions, 2018
London, UK

Diversity Scholar - H2O AI Conf., 2018
London, UK

Diversity Scholar - DockerCon, 2018
San Francisco, US

Travel Grant - EthDenver Hackathon, 2018
Denver, US

Full grant - KubeCon+CloudNativeCon, 2017
Austin, TX, US

Full grant - OpenStack Summit, 2017
Sydney, Australia

Full grant - WikiToLearn India Conference, 2017
Jaipur, India

Full grant - Mozilla Summit, 2016
Pune, India

LEADERSHIP &

MENTORING EXPERIENCE

Teaching Assistant, INTELLIGENT SYSTEMS AND DATA MINING (CIS111-6), University of Bedfordshire • Sept'18-June'21
United Kingdom

Postgraduate Research Representative - University of Bedfordshire • July'19 - July'20
Bedfordshire, United Kingdom

Representative - Mozilla Foundation • Oct'16 - May'19
India

Co-Organizer - Global FinTech Conference • Feb'19
New Delhi, India

GOOGLE CODE-IN Mentor, PostgreSQL Oct'18 - Dec'18

GOOGLE CODE-IN Mentor, OpenWISP Nov'17 - Jan'18

Organizer - Global Blockchain Conference • Dec'17
New Delhi, India

PROFESSIONAL SERVICE

Web/Competition Chair
CHILites (SIGCHI) 2019 / HASOC, FIRE Conference 2020

Journal Reviewer
JOSS 2019, MTAP Journal 2019, IEEE TMI 2020

Conference Reviewer
ML4PS workshop (NeurIPS 2019-2020), ECIR 2020, ACM ICMI 2021

Reinforcement Learning-driven Information Seeking: A Quantum Probabilistic Approach, IN PROCEEDINGS OF BRIDGING THE GAP BETWEEN INFORMATION SCIENCE, INFORMATION RETRIEVAL AND DATA SCIENCE (BIRDS), SIGIR • 2020

Amit Kumar Jaiswal, Haiming Liu, Ingo Frommholz

Utilising Information Foraging Theory for User Interaction with Image Query Auto-Completion, EUROPEAN CONFERENCE OF INFORMATION RETRIEVAL (ECIR) • 2020

Amit Kumar Jaiswal, Haiming Liu, Ingo Frommholz

Information Foraging for Enhancing Implicit Feedback in Content-based Image Recommendation, ACM FIRE CONFERENCE • 2019

Amit Kumar Jaiswal, Haiming Liu, Ingo Frommholz

Semi-Supervised Learning for Cancer Detection of Lymph Node Metastases, PROCEEDINGS OF TOWARDS CAUSAL, EXPLAINABLE AND UNIVERSAL MEDICAL VISUAL DIAGNOSIS WORKSHOP AT CVPR • 2019

Amit Kumar Jaiswal*, Ivan Panshin*, Dimitrij Shulkin*, Nagender Aneja, Samuel Abramov

Effects of Foraging in Personalized Content-based Image Recommendation, PROCEEDINGS OF THE 2ND EARS WORKSHOP AT SIGIR • 2019

Amit Kumar Jaiswal, Haiming Liu, Ingo Frommholz

Identifying Pneumonia in Chest X-Rays: A Deep Learning Approach, JOURNAL OF MEASUREMENT • 2019

Amit Kumar Jaiswal, P. Tiwari, S. Kumar, Deepak Gupta, Ashish Khanna, Joel J.P.C. Rodrigues

Investigating Interactive Information Retrieval via Information Foraging Theory, FDIA WORKSHOP AT ACM ICTIR • 2018

Amit Kumar Jaiswal

Quantum-like Generalization of Complex Word Embedding: A Lightweight Approach for Textual Classification, LWDA CONFERENCE • 2018

Amit Kumar Jaiswal, Guilherme Holdack, Ingo Frommholz, Haiming Liu

PROJECTS

Quantum-inspired Word Embedding • 2018

Contributed Codebase: <https://github.com/wabyking/qnn>

Capsule Network for Named Entity Recognition • 2018

Codebase: https://github.com/amitkumarj441/CapsRoute_NER

Parsec: A web-scale state channel for the Internet of Value • 2017

Codebase: <https://github.com/amitkumarj441/Parsec>

SQL Query Generator for Natural Language • 2017

Codebase: <https://github.com/amitkumarj441/SQGNL>

COMPETITIONS & HACKATHONS

Collaborative Hackathon, Alan Turing Institute, London • Sept 2019
Applied probabilistic modelling and ML for Bandwidth allocation on Saudi Arabia Telecom (STC) data

Collaborative Hackathon by Alan Turing Institute, London at University of Bristol • Aug 2019

Applied ML/DL for Protein Folding

Google Code Jam • 2018

Qualified Round 2 (overall 4 Rounds)

IndiaHacks Hackathon, Bangalore, India

Built Parsec (*Runner-up*, 2017)

Rajasthan E-Governance Hackathon, Jaipur, India

Built ManhoodCoin based on Hyperledger (*FinTech Track Winner*, 2017)

EtherCamp Virtual Hackathon • 2016

Built MultiSig Crypto Wallet (*Runner Up - Wepesa Team*)