KESHAV BHANDARI

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SUMMARY

I am a 2nd year PhD student in the Department of Computer Science at Queen Mary University of London. I am interested in music generation and information retrieval in both audio and symbolic domains.

EDUCATION

Queen Mary University of London, School of Electronic Engineering and Computer Science — ***Sep 2023 – Present***
PhD in Computer Science – Neuro Symbolic Automated Music Composition — *London, UK*

Northwestern University, McCormick School of Engineering — ***Sep 2021– Dec 2022***
Master of Science in Artificial Intelligence — *Evanston, IL, USA*

Purdue University, Krannert School of Management — ***Aug 2012 – May 2016***
Bachelor of Science in Business Management & Marketing (Dean's List, 2013) — *West Lafayette, IN*

PUBLICATIONS

- **Bhandari, K**., & Colton, S. (2025 Submitted). Yin-Yang: Developing Motifs With Long-Term Structure And Controllability. In International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART 2025)
- Colton, S., Bradshaw, L., Banar, B., & **Bhandari, K**. (2024). Automatic Generation of Expressive Piano Miniatures. International Conference on Computational Creativity (ICCC).
- **Bhandari, K**., & Colton, S. (2024). Motifs, Phrases, and Beyond: The Modelling of Structure in Symbolic Music Generation. In International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART 2024).
- O'Reilly, P., Bugler, A., **Bhandari, K**., Morrison, M., & Pardo, B. (2022). VoiceBlock: Privacy through Real-Time Adversarial Attacks with Audio-to-Audio Models. Advances in Neural Information Processing Systems, 35, 30058-30070.

CONFERENCE PRESENTATIONS

- Augmentations to improve rare bird call classification for a highly imbalanced multi-label soundscape environment", 11th International Conference on Ecological Informatics (ICEI 2020+1), Digital University Kerala, India, Nov' 21

GRANTS AWARDED

- AI for Earth grant, Azure, Microsoft, Oct' 21, "Using deep learning to build a robust automated recognition system for rare and endangered birds in India".

TEACHING

- Senior Demonstrator for Data Science and AI master's cohort — **Sep 2024 - Present**
- Demonstrator for ECS7024P - Statistics for Artificial Intelligence and Data Science — **Sep 2024 - Present**
- Teaching Fellow – Supervising 4 undergraduate students on their projects — **Oct 2024 - Present**
- Google DeepMind Research Ready Programme - PhD Mentor for two students on a research project. — ***Jun 2024 – Jul 2024***

PROFESSIONAL EXPERIENCE

Boston Consulting Group — ***Jan 2023 – Sep 2023***
Data Scientist — *Los Angeles, CA, USA*

- Vodafone Italy: Built an application with image inpainting and object removal using Facebook's Llama, Segment Anything Model & Stable Diffusion to provide digital marketers the ability to automatically create and modify images for display ads.
- Staples: Built a pattern matching algorithm to identify closest control group samples in a pilot study to that of test group for reporting precision and strategic decision making.
- Walgreens: Built model drift scripts to rectify deviations in price optimization algorithm in a MLOps framework.

Epsilon — ***Sep 2017 – Feb 2021***
Senior Data Scientist — *Bangalore, Karnataka, India*
Machine Learning Product Engineering Team

- Built and deployed scalable sequential (NLP) deep learning based personalized recommendation engines using *LSTM-Attention & Transformers* in Python, PySpark & Tensorflow, thereby improving clients' hit rates by **1.5%-5%**.
- Deployed numerous end-to-end machine learning & deep learning solutions as a product for retail and FMCG clients through PySpark, Python, AWS (SageMaker, Lambda, Docker, etc.) & BitBucket, achieving lifts between **3X to 9X**.
- Developed Gredel – a R-Shiny based package that fully automates the entire end to end predictive modelling process and makes black box XGBoost ML results interpretable.

ACCOMPLISHMENTS

- 2nd place in Epsilon India Recommendation Engine Hackathon (26 Teams) — *2020*
- Top 6% Kaggle Categorical Feature Encoding Challenge (1,342 Teams) — *2019*
- Champion Innovator Spot Award, Epsilon — *2019*

- Top 3% Kaggle TalkingData Ad-Tracking Fraud Detection Challenge (3,946 Teams) *2018*

LEADERSHIP & COMMUNITY SERVICE

Data Kind, Bangalore Chapter ***Aug 2018 – Oct 2019***

President, Purdue Marketing Association, Purdue University ***Jan 2015 - Dec 2015***