JONATHAN WINDLE

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As an experienced, published researcher in Multimodal Generative AI, I'm privileged to have studied my passion for five years in academia. As my PhD comes to an end, my goal is to bring my expert knowledge into industry and help guide a market-leading company to fulfil its AI goals.

EXPERIENCE

Postgraduate Researcher

University of East Anglia — Oct 2020 – Present

- Developed cutting-edge **Multimodal Generative AI** models for speech-to-animation, including **diffusion models**
- One of the highest ranking teams in two Generation and Evaluation of Non-verbal Behaviour for Embodied Agents Challenges.
- Harnessed **Large Language Model (LLM)** features
- Technical communication experience from publications, conference talks and guest lectures
- Developed AI engineering and experimental procedure experience by tracking experiment performance and model optimisation using tools such as Weights and Biases
- Performed extensive subjective and objective evaluation using advanced techniques such as Frechet Distances and pair-wise statistical analysis
- Multimodal data analysis and exploration
- Conference paper reviewer
- Gained event organising skills as a BMVA summer school volunteer

Research Associate

University of East Anglia — Jun 2019 – September 2020

- Using AI for user identification using keystroke dynamics
- Engaged in the AI Ethics discussion
- Designed machine learning experiments.
- Developed a full-stack online data-gathering platform and data-processing pipeline for use on multiple datasets.
- Collaborated with other research groups.

Associate Tutor

University of East Anglia — Sep 2019 – Present

- Providing support on Artificial Intelligence, Architectures & Operating Systems, Ubiquitous Computing, Programming and Data Structures and Algorithms modules
- Assisted students in Laboratory sessions, providing constructing feedback and informative presentations

Software Developer Intern

Boeing Defence UK — Jul 2017 – Sep 2018

- Experience in industry-leading R&D department
- Delivered business-critical software to the Ministry of Defence
- Worked on prototype software for automated object detection using location and sensor data
- Worked on a full-stack website development project
- Quick code implementation, prototyping and experimental skills
- Built test service to automate, execute and calculate test metrics
- Experienced requirements gathering and current landscape analysis
- Employee Involvement vice-captain. A leader in encouraging good team practices, active team involvement, improvements and cost reduction initiatives

RELEVANT SKILLS

Machine Learning Tools

PyTorch | NumPy | SciKit-Learn | Pandas | Weights & Biases | HuggingFace

Programming Languages

Python | Java | C | C++

Development Tools

GIT | Trello | Jira | Docker

EDUCATION

PhD in Artificial Intelligence (expected)

University of East Anglia

Oct 2020 – Present

Thesis title: Digital Humans: Automatic Character Animation
Expected thesis submission April 2024
Expected viva completion June 2024

B.Sc. Hons: Computing Science with a year in industry - First Class

University of East Anglia

Sep 2015 – Jun 2019

REFERENCES

Available on request

PUBLICATIONS

Journal Articles

- **J. Windle**, I. Matthews, and S. Taylor, "Llanimation: Llama driven animation," *ACM Trans. Graph.*, 2024, **UNDER REVIEW**.
- O. Buckley, D. Hodges, **J. Windle**, and S. Earl, "Clicka: Collecting and leveraging identity cues with keystroke dynamics," *Computers & Security*, vol. 120, p. 102 780, 2022.
- **J. Windle**, S. Taylor, D. Greenwood, and I. Matthews, "Arm motion symmetry in conversation," *Speech Communication*, vol. 144, pp. 75–88, 2022, ISSN: 0167-6393. DOI: https://doi.org/10.1016/j.specom.2022.08.001.

Conference Proceedings

- **J. Windle**, I. Matthews, and S. Taylor, "Style conditioned speech-to-gesture generation with long-term context," in *Proceedings of the European Conference on Computer Vision*, **UNDER REVIEW**, 2024.
- **J. Windle**, I. Matthews, B. Milner, and S. Taylor, "The uea digital humans entry to the genea challenge 2023," in *Proceedings of the 25th International Conference on Multimodal Interaction*, ser. ICMI '23, <conf-loc>, <city>Paris</city>, <country>France</country>, </conf-loc>: Association for Computing Machinery, 2023, pp. 802–810, ISBN: 9798400700552. DOI: 10.1145/3577190.3616116.
- **J. Windle**, D. Greenwood, and S. Taylor, "Uea digital humans entry to the genea challenge 2022," in *Proceedings of the 2022 International Conference on Multimodal Interaction*, ser. ICMI '22, Bengaluru, India: Association for Computing Machinery, 2022, pp. 771–777, ISBN: 9781450393904. DOI: 10.1145/3536221.3558065.
- **J. Windle**, S. Taylor, D. Greenwood, and I. Matthews, "Pose augmentation: Mirror the right way," in *Proceedings of the 22nd ACM International Conference on Intelligent Virtual Agents*, ser. IVA '22, Faro, Portugal: Association for Computing Machinery, 2022, ISBN: 9781450392488. DOI: 10.1145/3514197.3549677.
- S. Taylor, **J. Windle**, D. Greenwood, and I. Matthews, "Speech-driven conversational agents using conditional flow-vaes," in *Proceedings of the 18th ACM SIGGRAPH European Conference on Visual Media Production*, ser. CVMP '21, London, United Kingdom: Association for Computing Machinery, 2021, ISBN: 9781450390941. DOI: 10.1145/3485441.3485647.