ANDREW M. DEMETRIOU (HE/HIM)

Broadly experienced social science researcher specializing in data design, collection, and analysis of complex, subjective phenomena. Skilled in interdisciplinary collaboration with computational scientists across academic and industry settings, with a focus on measuring human perception through survey data, and human experience through physiological sensors.

Selected Research Experience

PhD Candidate, 09.2018-03.2024 (expected submission)
Delft University of Technology: Multimedia Computing, Intelligent Systems
- Pioneering an interdisciplinary approach to ground truthing by incorporating knowledge and practice from the social sciences, with the aim of developing protocols for complex data collection, robust reliability and validation analyses, and tackling high-variability problems like subjective, interdisciplinary ground-truth

Research Associate Internship, 08.2024-present
Universal Music Group
- Built data pipeline to extract and analyze sensor data from multiple devices
- Co-developed scientific presentation materials for stakeholder communication
- Established code notebook infrastructure for streamlined visualization and reporting

Research Scientist Internship, 04.2024-07.2024
VIER
- Led evaluation design and data collection for a prototype LLM system
- Extracted performance insights of prototype to inform first client demo
- Synthesized techniques from extensive LLM research to inform development

Student Board Member, 11.2019 – 01.2022
International Society for Music Information Retrieval: ISMIR
- Co-developed diversity initiatives in partnership with board members to promote inclusivity within the ISMIR community

Research Scientist, 01.2018
Spotify NY, Research and Development
- Executed 3 user studies that began with imprecise text responses to general questions, and resulted in quantitative insights into the most important features of music to Spotify listeners

Selected Manuscripts

Demetriou, A. M., Kim, J., Manolios, S., & Liem, C. (2024). "Towards Estimating Personal Values in Song Lyrics." In *Proceedings of the 25th International Society for Music Information Retrieval Conference.* https://arxiv.org/abs/2408.12694.

Sav, A. G., Demetriou, A. M., & Liem, C. C. S. (2023). "Annotation Practices in Societally Impactful Machine Learning Applications: What are Popular Recommender Systems Models Actually Trained On?" In *Perspectives on the Evaluation of Recommender Systems Workshop*. https://ceur-ws.org/Vol-3476/paper1.pdf.

Liem, C. C., & Demetriou, A. M. (2023, May). "Treat societally impactful scientific insights as open-source software artifacts." In *2023 IEEE/ACM 45th International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)* (pp. 150-156). doi: 10.1109/ICSE-SEIS58686.2023.00020

Kim, J., Demetriou, A. M., Manolios, S., Tavella S. M., Liem, C. C. S. (2020) "'Butter Lyrics Over Hominy Grit': Comparing Audio and Psychology-Based Text Features in MIR Tasks." In *Proceedings of the 21st International Society for Music Information Retrieval Conference.* https://program.ismir2020.net/poster_6-12.html.

E. J. Humphrey et al. (2019). "An Introduction to Signal Processing for Singing-Voice Analysis: High Notes in the Effort to Automate the Understanding of Vocals in Music," in *IEEE Signal Processing Magazine*, vol. 36, no. 1, pp. 82-94, doi: 10.1109/MSP.2018.2875133.

Van Gelder, J. L., De Vries, R. E., Demetriou, A. M., Van Sintemaartensdijk, I., & Donker, T. (2019). "The virtual reality scenario method: Moving from imagination to immersion in criminal decision-making research." In *Journal of research in crime and delinquency*, 56(3), 451-480. doi: 10.1177/002242781881969

Liem, C.C.S., Langer, M., Demetriou, A.M., Hiemstra, A.M.F., Wicaksana, A.S., Born, M.P. & König, C.J. (2018). "Psychology Meets Machine Learning: Interdisciplinary Perspectives on Algorithmic Job Candidate Screening". In Escalante, J.H., et. Al (Eds.) *Explainable and interpretable Models in Computer Vision and Machine Learning*, pp. 197-253. Springer International Published in Springer Nature, Switzerland. doi: 10.1007/978-3-319-98131-4_9

Demetriou, A. M., Jansson, A., Kumar, A., & Bittner, R. M. (2018, September). Vocals in Music Matter: the Relevance of Vocals in the Minds of Listeners. In ISMIR (pp. 514-520). https://ismir2018.ircam.fr/doc/pdfs/98_Paper.pdf

Cabrera-Quiros, L., Demetriou, A. M., Gedik, E., van der Meij, L., & Hung, H. (2018). "The MatchNMingle dataset: a novel multi-sensor resource for the analysis of social interactions and group dynamics in-the-wild during free-standing conversations and speed dates". In *IEEE Transactions on Affective Computing*, 12(1), 113-130. doi: 10.1109/TAFFC.2018.2848914

Demetriou, A. M., Larson & M., Liem, C. C. S. (2016). "Go With the Flow: When Listeners Use Music as Technology". In *Proceedings of the 17th International Society for Music Information Retrieval Conference,* https://wp.nyu.edu/ismir2016/wp-content/uploads/sites/2294/2016/07/068_Paper.pdf

Selected Presentations

Liem, C.C.S. & Demetriou A.M. (2019). "Psychology Meets Machine Learning." Presentation given at the *International Convention of Psychological Science*

Upham, F., McFee, B., Demetriou, A.M., (2018). "Relevance of vocals to music listener preferences". *So Strangely Podcast.*

Demetriou, A.M., Laplante, A., Cunningham, S.J., Liem, C.C.S. (2017). "So you want to conduct a user study in MIR?" Tutorial given at *the 18th International Society for Music Information Retrieval Conference*

References

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