Derek Mracek, PhD

Data Scientist & Industrial Organizational Psychologist

Experienced expert seeking new role in talent/people science.

Skills: NLP, software dev, modeling, communication, innovation

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EXPERIENCE

derekmracek.io, Principal — *Minneapolis, MN*

SEP 2020 - PRESENT

- Develop machine teaching and machine learning solutions
- Offer advice and expertise related to psychometrics
- Create project plans addressing necessary requirements

Lambda School, Senior Data Scientist — *Minneapolis, MN*

OCT 2019 - AUG 2020

- Performed analysis and modeling to provide insights into different aspects of the business especially admissions
- Integrated solutions into applications and tools with data engineers, analysts, business leads and developers
- Managed and evaluated assessment solution providers

Modern Hire, Senior Data Scientist — *Minneapolis, MN*

JUN 2015 - OCT 2019

- Envisioned, prototyped and delivered capabilities and products involving artificial intelligence and machine learning
- Informed the companies' long- and short-term vision, focus, and strategy
- Provided industry thought leadership (e.g., multiple awards, webinars, white papers)
- Developed interpretable and legally defensible models for predicting important phenomenon such as: expertise, performance ratings and metrics, turnover, engagement, leadership

ACT Workforce Research, Summer Intern — *Iowa City, IA*

MAY 2014 - AUG 2014

- Developed assessment for performance appraisal using factor analysis
- Wrote technical paper to document the research and development process
- Planned and conducted survey involving user reactions to assessment as well as presented findings to internal stakeholders

MOST PROUD OF

Pioneering the Application of Deep Learning to Talent Acquisition.

Automated the expert evaluation of unstructured text (press release)

SHRM Business Impact Awards

Consulting to the Fortune 10, demonstrated the BI and legal defensibility of hiring solutions.

Color-mapping of Deep Learning Models

Enables stakeholders to visualize what words are positively or negatively related to certain competencies
2019 HR Tech Demo

EXAMPLE TECH

Languages Python Git R SQL AWS SPSS SAS MPLUS

Python Packages pandas spaCy Metaflow Snorkel Keras Transformers Requests

Analyses NLP Adversarial Debiasing IRT Deep Learning

Agile Project Management JIRA ASANA Trello MS Teams

EDUCATION

University of Oklahoma, PhD

MAJOR: Industrial Organizational Psychology **MINOR**: Quantitative Psychology

East Carolina University, MA

MAJOR: Industrial Organizational Psychology

University of Minnesota Duluth, BS

MAJOR: Psychology **MINOR**: Coaching

SELECT PRESENTATIONS

Mracek, D.L., Sydell, E., Thompson, I.B., & Koenig N. (2019, July). *AI powered realistic job previews*. Winner of the IPAC 2019 Innovations in Assessment Award and presented at the annual meeting of the International Personnel Assessment Council, Minneapolis, MN.

Mracek, D.L., & Thompson, I.B. (2021, April). *Machine teaching: the state of the art and science of rating unstructured data.* Alternative session to be presented at the 36th annual meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Mracek, D.L., Petersen, N., Barsa, A., & Koenig N. (2021, April). *DEEP*O*NET: a neural network approach to leveraging detailed text descriptions of the world of work.* Symposium to be presented at the 36th annual meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Andrews, J.S, & **Mracek, D.L.** (2021, April). *Artificial intelligence to automate the evaluation of social media images.* Symposium to be presented at the 36th annual meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.

Omori, C., Sheets, T., Andrew, L., Kim, B., Landers, R.N., & **Mracek, D.L.** (2019, April). *Predicting the future of prediction: A discussion of technology in assessment and selection.* Panel presented at the 34th annual meeting of the Society for Industrial and Organizational Psychology, National Harbor, MD.

Petersen, N.L., King, R.T., **Mracek, D.L.,** Harvel, J., Girouard, M.J., & Harpe, L. (2019, April). *Opening the black box: legal defensibility of machine learning in assessment.* Panel presented at the 34th annual meeting of the Society for Industrial and Organizational Psychology, National Harbor, MD.

PUBLICATIONS

Rockwood, J., **Mracek, D. L.,** & Day, E. A.(2020). Relating subjective workload and effort to performance during stable and shifting task demands: A multilevel approach, Proceedings of the Human Factors and Ergonomics Society 64th Annual Meeting, Chicago, IL: Human Factors and Ergonomics Society.

Cubrich, M., King, R.T., **Mracek, D.L.,** Strong, J., Hassenkamp, K., Vaughn, E.D., Dudley, N. (2021). Examining the criterion-related validity evidence of LinkedIn profile elements in an applied sample. *Computers in Human Behavior*. Manuscript accepted for publication.

Thompson, I., Koenig, N., **Mracek, D.L.,** & Tonidandel, S. (2021). Integrating deep learning and measurement science: Automating the subject matter expertise used to evaluate candidate work samples. *Journal Applied Psychology*. Revise and Resubmit.

Mracek, D. L., Arsenault, M. A., Day, E. A., Hardy, J. H., & Terry, R. A. (2014). A multilevel approach to relating subjective workload to performance after shifts in task demands. Human Factors, 56, 1401-1413. doi:0018720814533964.

Barrett, J. D., Vessey, W. B., Griffith, J. A., **Mracek, D. L.,** & Mumford, M. D. (2014). Predicting scientific creativity: the role of adversity, collaborations, and work strategies. Creativity Research Journal, 26, 39-52. doi:10.1080/10400419.2014.873660