CALEN WALSHE

Staff Quantitative Researcher (Data Science + UX)

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Seattle / Redmond, WA

SUMMARY

Staff-level data scientist specializing in quantitative UX, product experimentation, and ML for trust and safety. 10+ years across industry and academia applying SQL/Python, A/B testing, causal inference, and LLM methods to large-scale systems. Delivered >$1B impact at Meta by embedding with product teams, defining north-star metrics, and pioneering survey + generative AI pipelines to improve ad quality and user experience. Senior IC acting in a leadership capacity, partnering with a core group of leads overseeing a team that drives multi-billion dollar Meta revenue impact.

CORE COMPETENCIES

Technical Skills

SQL, Python, Production-level code development (data pipelines), Causal inference, Quasi-experiments, Simulation modeling, Metric definition, Self-serve dashboards (Tableau + internal tools), Embeddings, Fine-tuning, Generative AI (LLM deployment at scale using internal company infra such as FB Learner).

Product & Communication

Embedding with product teams, Defining north-star metrics, Balancing fraud loss vs. UX cost, Clear comms to executives/policy/security, Driving adoption of self-serve analytics.

Domain Expertise

Product experimentation & growth, Fraud/abuse detection, Trust & safety, Content moderation, Survey Science, Applied NLP + LLM pipelines.

EXPERIENCE

Meta — Staff Quantitative Researcher (Ad Tech)

Nov 2021 – Present | Bellevue, WA

- Designed and ran large-scale A/B and quasi-experiments to evaluate new product features; results directly informed multi-billion-dollar revenue decisions.
- Defined and operationalized north-star metrics for ad quality and improved user experience, now standard across product and engineering teams.

- Built production-level data pipelines in SQL and Python for survey integration and experimentation, enabling self-serve analytics across the org.
- Partnered with product and engineering to balance fraud risk, implementation cost, and customer experience in trust and safety systems.
- Pioneered applications of generative AI at scale, deploying LLM pipelines to classify millions of pieces of user feedback and produce new quality signals for ranking models.
- Created and socialized dashboards combining behavioral data, survey insights, and ML outputs; adopted by hundreds of stakeholders for decision-making.
- Key member of the Ads core leadership group, partnering cross-functionally to guide strategy and execution for a team responsible for a significant share of Meta's revenue.

C. Light Technologies — Data Scientist

Mar 2021 – Nov 2021 | Berkeley, CA

- Built software classifiers to automatically detect poor-quality retinal scans, improving diagnostic reliability.
- Collaborated with hardware engineers to embed the detection system directly into devices, enabling real-time rejection of invalid scans.
- Work directly contributed to patent US20250057414A1 on retinal disease detection methods (link).

The University of Texas at Austin — Research Scientist (Postdoc)

Aug 2015 – Mar 2021 | Austin, TX

- Conducted independent research in computational neuroscience to advance understanding of brain function and cognition.
- Developed novel intellectual property for the lab, combining Bayesian inference, machine learning, and neuroimaging analysis.
- Produced multiple first-author publications in neuroscience journals and AI conferences, including *Current Biology* and AAAI.
- Established cross-disciplinary collaborations, securing funding and presenting findings at international conferences.

EDUCATION

PhD, Cognitive Neuroscience — University of Edinburgh

2011–2015
Computational Visual Cognition Lab · Dean's Scholarship & NSERC Fellowship

BSc, Cognitive Science (AI concentration) — Simon Fraser University

2005–2009

SELECTED PUBLICATIONS

- **Walshe, R.C.**, Geisler, W.S. (2022). Efficient Allocation of Attentional Sensitivity Gain in Visual Cortex Reduces Foveal Sensitivity in Visual Search. *Current Biology*.
- Zhang, R., **Walshe, R.C.**, Liu, Z., Guan, L., Muller, K.S., Writner, J.A., Zhang, L., Hayhoe, M.M., Ballard, D.H. (2020). Atari-HEAD: Atari Human Eye-Tracking and Demonstration Dataset. *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20)*.
- **Walshe, R.C.**, Nuthmann, A. (2021). A computational dual-process model of fixation duration control in natural scene viewing. *Computational Brain & Behavior*.