

Danny Wyatt

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summary

Engineering lead experienced in creating bridges between research and product, guiding applied machine learning teams, and communicating technical concepts to extremely varied audiences.

Demonstrated experience with

- Balancing trade-offs between research ideals, product goals, and infrastructure constraints to deliver functional, pioneering, and scalable systems.
- Data-driven prioritization and project creation to hit (and exceed) KPIs
- Creating successful collaborations across organizations, sites, and functions.
- Establishing team missions, strategy, and roadmaps. Successfully executing those.
- Growing junior engineers into senior roles, and senior engineers into staff/lead roles. Growing tech leads.

experience

Meta

Staff Software Engineer, Generative AI

2023 - now

Senior Tech lead in Meta's Generative AI Benchmarking & Evaluation organization

- Led team building unified storage system for all Llama evaluation data.
 - Replaced text files and spreadsheets with standardized storage of prompts, responses, and evaluations in a single repository. Cut onboarding time 3X, data loading time 40x. Brought redundant eval runs from 2-3 per dataset to zero.
 - Established best practices and mentored junior engineers in testing, monitoring, release management, and scalability. Reduced latency 2x, outages 3x.
- Tech lead for multiple projects in safety evaluations
 - Developed a ground truth data collection system combining metrics, rater reliability, and per-source costs to automatically choose data sources. Reduced mislabeled data 2x, cut collection costs 48x.
 - Introduced a prioritization framework and release process for image understanding safety evals, enabling weekly evaluation reports after a 3-month gap.
 - Fine-tuned an LLM to detect and classify tone violations, reducing violation rate 1.5x.

Staff Software Engineer, Instagram

2022 - 2023

Tech lead for Instagram's ML Equity and Fairness team.

- Led junior engineers in analyzing and mitigating fairness issues for in-production ML systems involving 10+ partner teams.
- Automated discovery of the Pareto frontier balancing product and fairness metrics during integrity enforcement.
- Shipped 4 new integrity models, improving fairness metrics 2x with neutral overall product metric impact, and 1.2x gains for targeted user subsets.

Staff Software Engineer, Reality Labs

2021 - 2022

Tech lead across two teams in Reality Labs: one working on creator value and AR

ecosystem growth, and one working on privacy-aware ML.

- Planned and built 0-to-1 privacy-aware search and retrieval system for AR content.
- Led junior engineers in 1-to-100 development of a content exploration system to address cold start problems.
- Personally delivered topline metric gains 10x larger than other projects.

Software Engineering Manager 2019 - 2021

Managed a team of engineers using applied ML to make sense of noisy location data.

- Devised and executed a strategy to improve privacy while maintaining stable system quality
- Improved collaboration processes, shipping speed, and morale with partner teams across multiple orgs and sites
- Improved team happiness scores 1.5x (from previous manager)

Senior Software Engineer 2017 - 2019

Machine Learning and Infrastructure tech lead on a team working in the location space.

Devised and led projects that:

- Improved output quality 2.6x while reducing resource usage by 1.3x
- Expanded A/B testing ability to cover all system components (e.g. indexing, serving, etc.)
- Increased ML engineer tool chain efficiency to reduce time from idea to experiment by 3x

Google

Software Engineering Manager 2014 - 2017

Managed a team of several engineers working to solve the problem of semantic location understanding: inferring the named places a person visits in the physical world from noisy phone sensor & location data.

My team's output is shown in [Google Maps Timeline](#), and powers several other features:

- [Popular place visit times, duration, and waits](#)
- [Store visit ads conversions measurement](#)
- [Google Photos stories](#)

While supporting that team, I

- Doubled the team size
- Established new partnerships across multiple orgs and sites
- Improved team happiness scores 2x (from previous manager)

Senior Software Engineer 2010 - 2014

Tech lead of an applied ML team working to infer useful information from noisy user location data. Focussed the team's ML strategy on shippable models that could be quickly iterated on with in-production experiments. As an individual contributor, improved the quality of our output 30%.

Before that I worked on ranking and recommendations in social media streams.

Ericsson

Senior Technologist 2000 - 2003

Advised companies of all sizes on best use of emerging mobile web, location, and wireless networking technologies. Developed and documented SDKs, explained new technologies

to the press, and gave talks at developer conferences.

sputnik7.com

Senior Developer

1999 - 2000

Led a small team of engineers to build a first-in-class curated streaming video site. Architected serving and data storage infrastructure, designed data models, and chose backend infra vendors. Coordinated implementation among both full-time employees and contractors.

Siegel & Gale

Senior Developer

2000 - 2003

Designed and implemented web applications for Fortune 500 companies (Kodak, Citibank, Lucent, and others). Managed projects (and clients) from requirements gathering through release and maintenance.

education

University of Washington

Ph.D., Computer Science and Engineering

2010

Dissertation: [*Measuring and Modeling Networks of Human Social Behavior*](#)

Committee: Jeff Bilmes and Tanzeem Choudhury (advisors), Pedro Domingos, Mark Handcock, Steven Goodreau

M.S., Computer Science and Engineering

2005

Qualifying Project: *Unsupervised Activity Recognition using Automatically Mined Common Sense*

Advisors: Henry Kautz and Tanzeem Choudhury

Columbia University

B.A., *cum laude*

1998

Honors: George W. Hibbit Memorial Scholar 1996-98, Dean's List all semesters.

selected publications

Llama Team. "The Llama 3 Herd of Models." <https://arxiv.org/abs/2407.21783>. August, 2024.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes, James Kitts. "Inferring Colocation and Conversation Networks from Privacy-Sensitive Audio with Implications for Computational Social Science." *ACM Transactions on Intelligent Systems and Technology*. 2(1):1-41. January, 2011.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes. "Discovering Long Range Social Network Properties with Multi-Valued Time-Inhomogeneous Models." In *Proceedings of AAAI 2010*. Atlanta, GA. July 2010.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes. "Dynamic Multi-Valued Network Models for Predicting Face-to-Face Conversations." Poster at *NeurIPS-09 Workshop on Analyzing Networks and Learning with Graphs*. December, 2009.

Danny Wyatt. "Collective Behavior Modeling." In *Proceedings of AAAI Spring Symposium on Human Behavior Modeling*. Palo Alto, CA. March 2009.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes, and James Kitts. "Towards the Automated Social Analysis of Situated Speech Data." In *Proceedings of UbiComp 2008*. Seoul, Korea. September 2008.

Danny Wyatt, Tanzeem Choudhury, and Jeff Bilmes. “Learning Hidden Curved Exponential Random Graph Models to Infer Face-to-Face Interaction Networks from Situated Speech Data.” In *Proceedings of AAAI 2008*. Chicago, IL. July 2008.

Tanzeem Choudhury, Gaetano Borriello, Sunny Consolvo, Dirk Haehnel, Beverly Harrison, Bruce Hemingway, Jeff Hightower, Pedja Klasnja, Karl Koscher, Anthony LaMarca, James Landay, Louis LeGrand, Jonathan Lester, Ali Rahimi, Adam Rea, and **Danny Wyatt**. “The Mobile Sensing Platform: An Embedded System for Activity Recognition.” In *IEEE Pervasive Computing*. 7(2):32-41. April-June 2008.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes. “Creating Social Network Models from Sensor Data.” Poster at *NeurIPS-07 Workshop on Statistical Models of Networks*. December, 2007.

Danny Wyatt, Tanzeem Choudhury, and Jeff Bilmes. “Conversation Detection and Speaker Segmentation in Privacy-Sensitive Situated Speech Data.” In *Proceedings of Interspeech 2007*. Antwerp, Belgium. August 2007.

Danny Wyatt, Tanzeem Choudhury, and Henry Kautz. “Capturing Spontaneous Conversation and Social Dynamics: A Privacy Sensitive Data Collection Effort.” In *Proceedings of the 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP-07)*. Honolulu, HI. April, 2007.

Danny Wyatt, Tanzeem Choudhury, Jeff Bilmes, and Henry Kautz. “A Privacy-Sensitive Approach to Modeling Multi-Person Conversations.” In *Proceedings of the 20th International Joint Conference on education publications Artificial Intelligence (IJCAI-07)*. Hyderabad, India. January, 2007.

Danny Wyatt, Tanzeem Choudhury, Henry Kautz, James Kitts. “Creating Dynamic Social Network Models from Sensor Data.” Abstract in *International Sunbelt Social Network Conference*. April, 2006.

Tanzeem Choudhury, Matthai Philipose, **Danny Wyatt**, Jonathan Lester. “Towards Activity Databases: Using Sensors and Statistical Models to Summarize People’s Lives.” *IEEE Data Engineering Bulletin*. 29(1):49–56. March 2006.

Danny Wyatt, Tanzeem Choudhury, Henry Kautz, Dieter Fox. “Creating Dynamic Social Network Models Using Sensor Data.” Poster at *NeurIPS-05 Workshop on Recognition and Discovery of Activities and Interactions*. December, 2005.

Danny Wyatt, Matthai Philipose, and Tanzeem Choudhury. “Unsupervised Activity Recognition Using Automatically Mined Common Sense.” In *Proceedings of the 20th National Conference on Artificial Intelligence (AAAI-05)*. Pittsburgh, Pennsylvania. July 2005.