Randell Chase Cotta
randell.cotta@gmail.com,

SUMMARY

A highly technical ML Engineer/Data Scientist who can build/manage teams and communicate with all kinds of people. Comfortable leading formally (as Mgr.) or informally (as IC). Highly product focused, with a proven track record of building awesome data-driven products and growing businesses from $0.

PROFESSIONAL EXPERIENCE

LinkedIn, Inc.   Sunnyvale, CA

Staff AI Engineer *(Trust & Safety AI: Fake/Hacked Accounts)*   Jan 2021–Current

- Owned label modeling. Multiple applications of Weak Supervision in production, greatly reducing abuse on the site (FlyingSquid labels used to train downstream Account Takeover and Profile Content Classification models restrict +62% and +31% more accounts @ 98% precision, resp.).
- Owned Profile Content Classification. Re-architected fake profile content modeling, Consolidating multiple models (objectionable, scam, impersonation) into a BERT-tokenized multi-label CNN+MLP arch., for maintainability and performance (+28% restrictions @ 98% precision).

AI Manager *(Marketing Solutions AI)*   Jun 2019–Dec 2021

- Led team-of-teams (25 ICs, 3 Mgrs) integration of Drawbridge tech into LinkedIn Marketing. All KPIs on time/above target: Site-wide ROI: +27% (vs. +15% goal), Offsite Revenue: +18% (vs. +5% goal), Retargeting Revenue: +49% (vs. 15% goal).
- Led Marketing Identity Innovation Process. 40+ Engs took in exercises to identify, prioritize and fund innovative projects, resulting in multiple impactful production changes.
- Successfully managed the first year of COVID pandemic: Transitioned team to proper org, increased team scope, grew headcount and secured 4 promotions for direct reports.
- Drove design of new native UI optimization now used in production. Multi-objective oracleized contextual bandits model drives revenue ~$5MM/yr. (Patent Filed).

Drawbridge, Inc. (Drawbridge was acquired by LinkedIn - June 2019)   San Mateo, CA
Director of Data Science & ML   May 2017–Jun 2019
Lead Data Scientist   Jun 2016–May 2017
Sr Data Scientist   Jun 2014–Jun 2016
Data Scientist   Dec 2013–Jun 2014

Broad Strokes: 2015-2019: ML Lead for Identity business from $0 to ~$60MM ARR.
2013-2015: Owned campaign automation algorithms for our Cross-Device Bidding Platform.

Leadership, Management, Strategy:

- Led team culture change by taking control of roadmap and instituting routines like journal clubs and academic paper publishing that increased cohesiveness, creativity and impact.
- Tripled size of ML Team and had 100% retention while managing through headwinds.
- Partnered with Product/BD/Exec team to align data and eng roadmap with GTM strategy. Enabled SoTA features that improved customer win rate and churn.

Select Technical Contributions:

- <u>GFDC</u>: Generalized Fitness-Driven Clustering for massive complex networks. Novel algorithm scales to ~1T edge networks on Apache Giraph. Precision/Recall dominate standard scalable algorithms (~2x prec. increase with +11% recall vs. LP). Still in prod use after seven years.

- <u>DBID</u>: temporal regularization for massive community detection tasks. Scalable design encoded long-term observational histories to greatly stabilize probabilistic identity without precision loss.

- <u>iDB</u>: a database architecture for identity. Redesigned backend data arch. to improve agility in addressing new use-cases. Mobilized ~10 engineers toward implementation. Patent Issued.

- <u>Link-Predicting Graph RNN</u>: Deep BiLSTM stack on Weisfeiler-Lehman graph neighborhood representations. Spark/Keras/TensorFlow stack. Gave +6% AUC_{ROC} over hand-built features.

- <u>"Buckshot"</u>: A speedy metrics sampling platform. Huge reduction in cost of metrics computation greatly improved ML observability (metrics coverage/recency/latency).

- <u>Bayesian Creative Bandits:</u> Beta-Bernoulli Hierarchical Bandit Architecture for Ads creative optimization. Used in 100% of platform auctions for overall +5% CTR Lift.

EDUCATION

Stanford University, Graduate School of Business   Stanford, CA
LEAD Executive Education Certificate.
Emphasis: Corporate Innovation (4 quarters, 8 classes).

Stanford University   Stanford, CA
Doctor of Philosophy, Theoretical Physics.
Emphasis: High-Energy Particle Theory, Supersymmetry, Dark Matter.

University of California, Santa Barbara   Santa Barbara, CA
Bachelor of Science, Physics,
College of Creative Studies graduate, highest honors.

AWARDS/ACCOMPLISHMENTS

- **Drawbridge Most Innovative Employee** (2016, across Eng/Prod, voted by peers).

- **Drawbridge Hackathon Winner:** (2019, "RealID – An Anomalous Identity Explorer")

- **Academic Publications:** WSDM '19: bit.ly/3fKpjXl, All Papers: bit.ly/3SQANHH

- **Author** two patents issued, USPTO 9514248 and 10956454, another pending.

- **Ad Age 40 Under 40:** bit.ly/3T32qwY

Skills

- **ML:** Math, Stats, Deep Learning Architectures (CNN, RNN, MLP, GNN), especially NLP and Graph ML. Bandits, Active Learning, Weak Supervision, Crowdsourcing, Causal Observational methods, A/B tests, Graph algorithms (e.g., Community Detection). ML System Design, ML Ops.

- **Code/Data:** [Proficient]-Python, SQL, numpy/pandas/etc., Spark (Scala), xgBoost, TensorFlow, Git, RB, Linux CLI, Hadoop. [Familiar]-Java, pyTorch, pyg, giraph, design patterns, distributed data concepts.

- **Soft Skills:** Communication across a variety of stakeholders. Relationship building. Hiring & Retention. Career coaching. Managing through change/headwinds. Managing creative teams. Tactical and strategic management. Design thinking. Interest-based negotiation. Team Ops.

- **Domains:** Digital identity, fraud & abuse, digital advertising, social networks, consumer data.