

ZHENGXING CHEN

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Education

Northeastern University

PhD, Computer Science, expected 2018.

Beijing University of Posts & Telecommunications

BA, Information Engineering, 2013. GPA: 3.6/4.0 (Top 10%)

Experience

Instagram, Facebook Inc.

Software Engineer Intern. Menlo Park, 2017.9 – present
Content ranking for Instagram notifications

Google Inc.

Network Engineer Intern. Sunnyvale, 2017.6 – 2017.8
Forecast network traffic between Google data centers

Stubhub, eBay Inc.

Data Scientist Intern. Boston, 2016.8 – 2016.11
Optimized ranking of secondary-market ticket search

Electronic Arts

Data Scientist Intern. Redwood City, 2016.5 – 2016.8
Proposed a novel matchmaking system optimized for player engagement

Video Game Lab, Northeastern University

Research Assistant. Boston, 2014.1 - now
Research in game analytics, including player modeling, in-game behavior prediction, outcome prediction, recommendation systems, game AI

Skills

Python, Java, R, SQL

MapReduce, Spark, Hive, MongoDB

Scikit-Learn, Pandas, Tensorflow, Theano, PySpark

Projects

Instagram Notification Ranking

@ Facebook Inc.

- Deployed ranking models to generate high quality notification contents. Used Gradient Boosting Decision Trees and LambdaMART. Applied on notification actor ranking, email campaign and content ranking. CTR rates increase 4~5%.
- Designed, implemented and deployed an reinforcement learning based notification delivery agent for live broadcast notifications. Clicks increase 10%.

Data Center Network Traffic Forecast

@ Google Inc.

- Designed and implemented supervised models to predict network traffic between Google data centers (Neural Network, ARIMA, Recurrent Neural Network, Curve Fit)
- Designed and implemented evaluation metrics for forecast performance

Secondary-Market Tickets Ranking

@ Stubhub, eBay Inc.

- Utilized pairwise ranking algorithms to optimize the search ranking of secondary-market tickets. Ticket display effectiveness got 25% boost.
- Utilized log-linear regression model to evaluate tickets' price-performance ratio
- Prototyped a novel pairwise ranking model utilizing side information

Engagement-Optimized Matchmaking

@ Electronic Arts

- Proposed a novel matchmaking system optimized for player engagement
- Utilized graph perfect matching algorithms, skill models and churn models to implement the system prototype
- Ran simulation with 10% more player retained compared to existing methods

Publication

Chen, Z., Xue, S., Kolen, J., Aghdaie, N., Zaman, K.A., Sun, Y. and Seif El-Nasr, M. EOMM: An Engagement Optimized Matchmaking Framework. In *World Wide Web (WWW)*, 2017.

Chen, Z., Sun, Y., Seif El-Nasr M., Nguyen, T. D. Player Skill Decomposition in Multiplayer Online Battle Arenas. In *Meaningful Play*, 2016.

Chen, Z., Seif El-Nasr, M., Canossa, A., Badler, J., Tignor, S., and Colvin, R. Modeling Individual Differences through Frequent Pattern Mining on Role-Playing Game Actions. In *Artificial Intelligence and Interactive Digital Entertainment (AIIDE)*, 2015.

Melcer, E., Nguyen, T. D., **Chen, Z.**, Canossa, A., Seif El-Nasr, M., and Isbister, K. Games Research Today: Analyzing the Academic Landscape 2000-2014. In *Foundation of Digital Games (FDG)*, 2015. **Best Paper.**

Nguyen, T. D., **Chen, Z.**, and Seif El-Nasr, M. Analytics-based AI Techniques for Better Gaming Experience. In *Game AI Pro 2*, 2015. (Book Chapter)