Melanie Tosik

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EXPERIENCE

Senior Data Scientist
06/2019 – present
BuzzFeed (New York, NY)

- Conceptualized and productionized a new image similarity model to surface personalized user × product recommendations across multiple contexts and experiences (+4% total affiliate earnings after initial model launch)
- Created the product strategy and led 0-1 launch for audience segmentation and ad targeting models based on first-party data
- Designed a new API to generate article embeddings in real-time and improve load time for related content recommendations (handling 3M+ requests per day, decreasing load time by 95%)
- Implemented a new infrastructure to power app feed algorithms in the BF iOS app by leveraging real-time BigQuery data, improved client event tracking, and a new API orchestration layer (+15% feed CTR and +7% sessions per user)
- Developed a contextual multi-arm bandit model to personalize BF app feeds based on users' content consumption preferences, including a framework for unbiased offline evaluation of candidate algorithms
- During an internship, created a suite of NLP-based tools to strategically publish content to BF Facebook pages, serving 20M+ fans and saving many hours of manual curation

Data Science Consultant
07/2017 – 12/2017
Underdog.io (New York, NY)

- Automated an internal pipeline to extract raw text and layout features from resumes in various file formats
- Implemented a supervised classification algorithm to scale and improve candidate-company matching

Research Engineer – NLP
10/2015 – 06/2017
WayBlazer (Austin, TX)

- Adapted a Neo4j graph database (based on ConceptNet 5) to power personalized travel recommendations
- Developed a natural language search tool to classify trip types and extract entities and relations mapping into the ontology
- Enriched destination recommendations by deriving users' personality insights and intent based on linked social media profiles
- Integrated internal APIs with airline/hotel inventory to increase direct bookings, drive social shares, and increase brand loyalty

Research Intern
06/2014 – 08/2014
Textkernel (Amsterdam, The Netherlands)

- Explored new methods of improving resume parsing for multi-lingual documents
- Implemented a probabilistic sequence labeling model that integrates word embeddings as features
- Results were published in a research paper at NAACL-HTL 2015

EDUCATION

MS, Computer Science
09/2017 – 05/2019
New York University (Courant Institute of Mathematical Sciences), New York, NY

- Graduate Teaching Assistant for "Predictive Analytics" and "Big Data Science" courses taught by Dr. Anasse Bari
- GPA: 3.5/4.0

BS, Computational Linguistics
10/2011 – 09/2015
University of Potsdam, Potsdam, Germany

SKILLS

Programming	Python, SQL, R, Java, C, C++, Go, CSS, HTML
Software libraries	PyTorch, Pandas, NumPy, SciPy, spaCy, TensorFlow, Keras
Reporting tools	Jupyter, Mode, Looker, Excel, Data Studio, Datadog
Miscellaneous	Git, LaTeX, Vertex AI, BigQuery, Kubeflow, GCP, Apache Airflow
Languages	German (native), English (fluent), French (working knowledge)