

# Melanie Tosik

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## EXPERIENCE

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### Staff Data Scientist

06/2019 – present

*BuzzFeed (New York, NY)*

- Renewed focus on app personalization by launching a "For You" package in the BF iOS app (+24% pageviews per session, projected 135m additional pageviews per year, +46% increase in affiliate revenue per session)
- Established new internal AI copilot ecosystem, comprising 5 unique AI assistants that cover media planning, talent and product matching, creative brainstorming, and deal pilots (500+ conversations per month, over 200 active internal users)
- Conceptualized and productionized a new image similarity model to surface personalized user x product recommendations across multiple contexts and experiences (+4% total affiliate earnings after initial model launch)
- Created 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
- 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
- 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
- Results were published in a research paper at NAACL-HTL 2015

## EDUCATION

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### 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

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#### Programming

Python, SQL, R, Java, C, C++, Go, CSS, HTML

#### Software libraries

PyTorch, Pandas, NumPy, SciPy, spaCy, TensorFlow, Keras, ChatGPT

#### Reporting tools

Jupyter, Mode, Looker, Excel, Data Studio, Datadog

#### Miscellaneous

Git, L<sup>A</sup>T<sub>E</sub>X, Vertex AI, BigQuery, Kubeflow, GCP, Apache Airflow

#### Languages

German (native), English (fluent), French (working knowledge)