Tim Schott

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Versatile Data Scientist passionate about translating complex data into actionable insights for decision–makers. Proven track record of creating scalable ML systems using cutting-edge technologies.

WORK EXPERIENCE

Red Ventures • Charlotte, NC • Full-time 07/2023–present + Internship 06/2022–08/2022
Senior Data Scientist, Growth and Transformation Team
- Architected a deep attention-based foundation model for clickstream data in PyTorch, deployed with real-time user propensity API serving over 1M daily requests. Replaced legacy LSTM system and eliminated $100k in annual spend through streamlined training. Built scalable data pipelines in PySpark and Pandas, and used MLFLow to back the deployment, evaluation, and observability capabilities.
- Built and deployed an automated reporting and recommendation system for multi-armed bandit personalization tests using Langraph's Agentic AI framework. Reduced analyst manual reporting time by 50% and closed the loop by auto-patching the personalization API with AI-generated recommendations. Deployed via Terraform-managed infrastructure on Databricks.
- Improved multi-armed bandit personalization system by integrating large language model (LLM) word embeddings as contextual option features, leading to a 40% lift in monetized asset click-through rate (CTR) in bandit tests. Authored a technical blog post on the project for the company Medium, viewed 500+ times. [link]

Brightspot • Reston, VA • Full-time 06/2019–07/2021 + Internship 06/2018–08/2018
Software Engineer, Client Delivery Team
- Performed object-oriented data modeling, data engineering and CMS customizations in a cross-functional setting. Taught client engineering teams how to use Brightspot APIs during open-door office hours.
- Delivered an ETL pipeline built with Java and MySQL for mattressfirm.com and sleep.com e-commerce products. This work greatly simplified publishing by automating the maintenance of a 5000+ product inventory. [link]

EDUCATION

Master of Information Management and Systems, Data Science concentration
University of California, Berkeley, School of Information • Berkeley, CA • 08/2021–05/2023
- Teaching: TA for Natural Language Processing, Spring 2022 + 2023. [syllabus]
- Research: Met weekly to discuss NLP projects and pedagogy with Professor David Bamman's doctoral advisees.

Bachelor of Arts with High Distinction in Computer Science and English
University of Virginia • Charlottesville, VA • 08/2015–05/2019
- Michael Wagenheim Award for Outstanding English Major (2019). [paper]
- Research: Analyzed Supreme Court data for Professor Jennifer Petersen [project]. Built a website exploring digital poetics for Professor Brad Pasanek using HTML, CSS and JavaScript. [project]

PUBLICATIONS

- First Author of "Polyglot or Not? Measuring Multilingual Encyclopedic Knowledge Retrieval from Foundation Language Models", published in *Empirical Methods in Natural Language Processing, 2023*. [paper] [code]

PROJECTS

Detail in the Novel • Fall 2022
- Trained a BERT classifier to detect "descriptive" prose styles in novels. Used attention visualization to interpret predictions; validated findings with statistical tests (χ^2). [paper] [code]

SERVICE

Rockbridge Animal Alliance • Lexington, VA • Fall 2022- Fall 2024
Webmaster
- Trained non-technical charity staff to use Google Sheets to track monthly pet food distribution events.
- Assisted with week-to-week website troubleshooting and social media campaigns to promote special events.

Boy Scouts of America, Troop 998 • Leesburg, VA • 2012
Eagle Scout