Zora Zorkic

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PROFESSIONAL EXPERIENCE

THE UNIVERSITY OF TEXAS AT AUSTIN, Austin, TX
August 2023 - Present
User Experience Researcher
- Leading an organization-wide Keizen for Texas Inventionworks to optimize operational workflows and unify employees on the organization's purpose and mission
- Facilitating 12+ generative research sessions
- Designing comprehensive quantitative surveys, laying the foundation for future statistical analysis
- Developed group personas, user flows, and journey maps from 60+ staff and thousands of students

THERMO FISHER SCIENTIFIC, San Diego, CA
July 2022 – July 2023
Artificial Intelligence Engineer
- Developed and deployed a conversationally intelligent, company domain chatbot to expedite internal information retrieval projected to bring $50 million in annual savings
- Designed and maintained PostgreSQL database to hold millions of pages of unstructured text data, user question/answer history, and other metadata
- Established contracts with international business units for document collection and established relationships user-feedback pipelines to guide product changes
- Tested the effects of several different embedding models to create computationally useful text

Machine Learning Engineer
- Developed a python API for a cloud-based machine learning inference pipeline for detection of anomalous curves in qPCR diagnostic assays using AWS Lambda and AWS Sagemaker
- Designed a short term time-series anomaly detection algorithm using an ensemble ML techniques and deployed the pipeline on AWS; received incubation funding
- Built data-visualization dashboards using Plotly Dash to allow users to explore analysis

GENENTECH, San Francisco, CA
May 2021 – August 2021
Computational Scientist
- Created a user-friendly data visualization micro-site to explore data analysis of immunotherapy
- Enhanced a experiment data analysis pipeline, improving speed and efficiency by over 100%
- Collaborated with international partners to establish a standardized lab workflow for the analysis

TEXAS INVENTIONWORKS, Austin, TX
January 2019 – July 2022
Front-End Software Engineer
- Oversaw 6 front-end engineers in the development of our customer service website
- Learned front-end web development in just 3 months

Design and Fabrication Engineering Lead
- Developed trainings and standard operating procedures for advanced manufacturing equipment, reaching thousands of students, staff, and faculty- establishing the organization's digital infrastructure.
- Educated hundreds of students on the engineering design process and rapid prototyping methods
- Directly oversaw 12 employees, lead weekly meetings, and coordinated Design and Fabrication projects

EDUCATION

The University of Texas at Austin, Austin, TX
- M.S. in Data Science

The University of Texas at Austin, Austin, TX
- B.S. in Computational Biology, Computer Science Minor (UT), Certificate in Biotechnology (ACC)

HIGHLIGHTED SKILLS

UX Research: Quantitative Research, Workshop Facilitation, Data Synthesis, Qualitative Research, Figma, Usability Testing, User Interviews, Accessibility & Universal Design, Affinity Diagramming, Wireframes and Prototypes, Survey Design, Design Thinking

Data Science: EDA, Deep Learning, NLP (LLMs, Sentiment Analysis, Topic Modeling, Text Classification), Data Governance, Databases, Statistical Learning, Regression, Classification (KNN, SVM, Naive Bayes, Random Forest, XGBoost), Clustering (K-means, Hierarchical), Dimensionality Reduction (t-SNE, UMAP, PCA)

Programming: Python (pandas, NumPy, PyTorch, scikit-learn, spaCy, nltk, Plotly Dash), R (Tidyverse, RShiny), SQL, Docker, Git, AWS, HPC, Software Engineering, Product Development

SELECTED PUBLICATIONS, AWARDS, & PRESENTATIONS

- Author: Zorkic, et al., Cloud-based Machine Learning Inference Pipeline for Anomaly Detection of qPCR curves. 2022. ThermoFisher Scientific Innovation Day Conference 2022.
- **Co-Author: Javanmardi, et al.. Rapid characterization of spike variants via mammalian cell surface display. 2021. Molecular Cell Volume 81, Issue 24, Pages 5099–5111.**
- Winner: 1st, 2nd, & 3rd place @ ThermoFisher Scientific Genetic Science Division 2022 Hackathon.
- Fellowship: D.E. Shaw Research Science and Engineering Fellowship - Computational Biochemistry

RESEARCH EXPERIENCE

THE MARCOTTE LAB, Austin, TX
May 2021 - December 2021
Machine Learning Research Scientist
- Assisted in the development of a tool that uses a Convolutional Neural Network to identify all proteins in samples using cryo-EM Images and Mass Spectrometry data
- Established standardized workflows to run AlphaFold2 jobs in High Performance Computing Environments

THE FINKELSTEIN LAB, Austin, TX
January 2020 - May 2021
Bioinformatics Research Scientist
- Developed an Exploratory Data Analysis pipeline to analyze 1 million SARS-CoV-2 patient protein sequences to find mutational patterns
- Engineered easy-to-use software tool for high-throughput creation of synthetic DNA libraries such and cloned constructs into cells for SARS-CoV-2 spike protein display project

THE ELLINGTON LAB, Austin, TX
January 2020 - May 2021
Synthetic Biology Research Scientist
- Genetically engineered Retron-CRISPR chimeras for applications in clinical gene editing
- Developed modular cloning toolkit for easy and efficient genetic engineering experimentation

MINICIRCLE INC., Austin, TX
August 2019 - January 2020
Gene Therapy Research Scientist
- Aided in the development of a minicircle based platform for affordable protein gene therapies
- Taught interns basic laboratory skills like buffer preparation, sterile technique, and bacterial cell culturing

THE UNIVERSITY OF TEXAS AT AUSTIN, Austin, TX
January 2019 - December 2019
Howard Hughes Medical Institute Product Development Research Fellow
- Developed gene amplification diagnostic assays that minimized diagnostic times for Malaria, TB, Enterococcus, and Tick Borne Illnesses to 30 minutes using Isothermal Loop Mediated Amplification
- Engineered, from scratch, a low-cost diagnostic device to run assays and map outbreaks in remotely