

BERK ALP YAKICI

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EDUCATION

Rice University, Houston, TX

M.S. in Computer Science

Expected: May 2023

B.S. in Computer Science (*Minor: Data Science*)

August 2018 - May 2022

TECHNICAL SKILLS

Programming Languages

Python, Java, Golang, SQL, R

Technologies

AWS, S3, EC2, SageMaker, Kubernetes, PyTorch, Maven, Splunk, Grafana, Kafka

WORK EXPERIENCE

AI/ML - Software Engineer Intern at Apple, Seattle, WA

May - August 2022

- Built a search indexing pipeline in Golang that uses OCR models to extract text from images, enabling users to find images through looking up captions. The index returns responses within 30ms after being queried.
- Increased search coverage (number of queries with responses) by 10% in English, Italian, and Japanese.
- Designed and deployed a Slack integration to search queries on the index directly from Apples workspace chat.

AI/ML - Software Engineer Intern at Apple, Seattle, WA

May - August 2021

- Developed a distributed data ingestion service on Java, which processed 50+ million records in 12 hours. Deployed it via Kubernetes on production environment.
- Integrated the service with monitoring tools such as Graphite and Splunk.
- Built a custom Grafana dashboard for real-time alerts and diagnostics.
- Automated A/B testing for continuous offline platform evaluation.

Machine Learning Engineer Consultant at Bill.com, Houston, TX

January - May 2021

- Developed a deep-learning/logistic regression model to monitor customer service chats and dynamically predict the probability of a negative outcome. This enables customer support agents to identify which conversations would require more attention than others and take action before the customer leaves the chat.
- Fine-tuned DistilBERT sentiment embedding vectors on Bill.com support chat data using AWS SageMaker.
- Identified 75% of negative outcomes in test set based on customer interactions at the midpoint of a conversation.

Undergraduate Researcher at Rice University CS Bioinformatics Group, Houston, TX

May - August 2020

- Utilized efficient 3-SAT solvers and graph search algorithms to reduce the input size from 680 to 30 for a phylogenomic network inference problem, dramatically reducing runtime by 22 times (1,625 less CPU-hours).
- Successfully inferred correct network topologies in 23/24 test cases even with the smaller input size.

Software Engineer Intern at OpenStax, Houston, TX

May - August 2019

- Engineered a metadata scraper and I/O tool in Python. Released the open source package on [PIP](#) and [GitHub](#).
- Expedited content team workflow by automating metadata transfer between development, Q&A, and production environments. Saved approximately 20 hours/week of manual content transfers.
- Increased the code coverage from 81% to 89% (out of 33,621 lines), focusing on unit tests on CI/CD.

TEACHING EXPERIENCE

Head Teaching Assistant

January 2020 - May 2022

- Directed student teaching staff of COMP 182 (Algorithmic Thinking) and COMP 382 (Reasoning About Algorithms).
- Developed an auto-grader for Python programming assignments, saving more than 1,280 hours of manual grading.
- Supervised a team of 30+ TAs, administered examinations, graded homework assignments, hosted office hours.

LEADERSHIP EXPERIENCE

President Rice Computer Science Club

April 2021 - April 2022

Public Affairs Officer Rice Eclipse Rocketry Team

April 2021 - April 2022