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 Apple's workspace chat.

AI/ML - Software Engineer Intern at **Apple**, Seattle, WA *May - August 2021*
- Developed a distributed data ingestion service on Java for an internal service, which processed 50+ million records in 12 hours. Deployed the service via Kubernetes.
- Integrated the service with monitoring tools such as Graphite and Splunk, and 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 on AWS SageMaker.
- Successfully flagged 75% of negative outcomes at the midway point of an ongoing conversation on hold-out test dataset.

Undergraduate Researcher at **Rice University CS Bioinformatics Group**, Houston, TX *May - August 2020*
- Implemented a heuristic divide-and-conquer algorithm that uses 3-SAT solvers and graph search algorithms to reduce the input size from 680 to 30 for a phylogenomic network inference problem.
- Decreased the inference time by 22 times (1,625 less CPU-hours) in 24 test cases of varying difficulties.
- Inferred the correct network topologies for 23/24 test cases 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*
- Served as Head TA for COMP 182 (Algorithmic Thinking) and 382 (Reasoning About Algorithms) for 4 semesters.
- 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*