Niloufar Hosseini Pour

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Professional Experience

- **Teradata** — El Segundo, CA
  Senior Software Engineer in database query optimizer team — *Mar 2020 - Present*
  - Worked on Native Object Store (NOS) File System feature to prepare the Teradata database for offerings on public and private cloud. Added capabilities to make the Teradata database more scalable and elastic.
  - Developed "Automatic Schema Detection" API. This is a C/C++ API that returns schema information for external data. Data can be in CSV/JSON/Parquet format, and it can be located on major cloud object stores such as Azure, S3, Google Cloud Storage. The accuracy of schema detection is 99% based on Kelly benchmark. Developed this API in a team of 3 and delivered more than 35% of the content.
  - Improved cardinality estimation for a foreign table so that query optimizer gets an optimal plan for Native Object Store (NOS) queries by reusing the "Automatic schema Detection" API in fast mode to get row size and row count while scanning and sampling external data.
  - Sped up statistics collection time on a $PATH expression of a NOS table by 4400× with 99% accuracy by collecting approximate stats while doing path filtering optimization.
  - Developed feature tests, ran performance and cost accuracy experiments, and presented the results to the team.
  - Mentored new hires and interns. Received outstanding feedback on my leadership, management, and mentorship.
- **Teradata** — El Segundo, CA
  Software Engineer in database query optimizer team — *Oct 2017 - Feb 2020*
  - Developed the "Autonomous Database" feature, which automatically builds a Teradata database for the given CSV files. (Recommends table schema, primary key, foreign key, and indexes for given CSV files.)
  - Analyzed, debugged and fixed complex bugs related to different features of query optimizer.
  - Assisted the frontline team by triaging customer issues quickly and effectively.
  - Managed and coordinated team social events. Achieved on-time and under budget execution with high satisfaction.
- **ESRI** — Redlands, CA
  Software Engineer in Test Intern — *Jun 2017 - Sep 2017*
  - Wrote test automation scripts for UI testing on multiple platforms (IOS, Android, Mac, etc.).
- **University of California Riverside** — Riverside, CA
  Research Assistant at Databases Lab — *Apr 2016 - Mar 2017*
  - Worked on a research project "Effective Crawling of Online Content Related to Real Estate Analytics".
  - Developed a robust multi-threaded web crawler in JAVA to get real estate data. (Crawled 10+ million records.)
  - Designed an appropriate schema on MySQL database to insert and retrieve the data efficiently.
  - Used Google Geocoding API, Google Places API and Yahoo Finance API to enrich data for analysis.
  - Visualized results using Google Maps API and analyzed the impact of different factors on property values.
  - Received an "excellent" rating from my research advisor in my annual review.
- **University of California Riverside** — Riverside, CA
  Teaching Assistant — *Jan 2016 - Dec 2016*
  - Taught C++ programming to 100+ students and helped them with their assignments and projects. Received very positive student evaluation at the end of each quarter.

Education

- **Master of Science in Computer Science** — Sep 2015 - Mar 2017
  University of California Riverside. GPA: 3.9 — *Riverside, CA*
- **Bachelor of Science in Computer Science** — Sep 2010 - Jun 2014
  Amirkabir University of Technology. GPA: 3.5 (First Class Honours) — *Tehran, Iran*

Technical Skills

- **Languages**: C/C++(Proficient), SQL(Proficient), Java(Familiar), Python(Familiar), HTML(Familiar),CSS(Familiar)
- **Systems/Packages:**: MySQL, PostgreSQL, Lucene, Hadoop.
- **Tools**: Eclipse, MATLAB, Git, Selenium WebDriver.

Certifications

- **Microsoft Azure Fundamentals**, June 2021
- **Microsoft Azure AI Fundamentals**, June 2021
- **Microsoft Azure Data Fundamentals**, May 2021
- **Certified SAFe® 4 Practitioner**, Nov 2019
- **Teradata Database Certified Associate**, May 2018

Projects

- **Identify Data Types for Data Sets by Deep Learning Techniques**: May 2019 - May 2019
  - Participated in a two-day company-wide Inventathon. Collaborated with a team of 5 and invented a new method for identifying data types for data sets by using two neural networks. Received a bonus for our creative thinking and submitted this innovation disclosure for patent review.
- **Social Network Search Engine using Java**: Oct 2016 - Dec 2016
  - Used the Twitter Streaming API to collect 5 GB geolocated tweets and implemented multithreaded program to get title of tweets using jsoup.
  - Built index on files using Apache Lucene and created a Web-based search interface using JSP. Visualized results on maps using Google Maps API.
- **Content Delivery Network (CDN) Latency Analysis using Python**: Apr 2016 - Jun 2016
  - Collected 10 CDNs across the US using Microsoft Azure cloud computing platform and selected 100 universities from US as candidate points.
  - Collected ping time from each CDN to all candidates by running a python script and analyzed where to add a new CDN to minimize latency.
- **Data Mining and Object Recognition using MATLAB**: Jan 2016 - Mar 2016
  - Identified RGB color space on the Google satellite images as training images.
  - Classified objects as pool or not pool using K nearest neighbor classifier with 95% accuracy.
- **Big Data Analysis with Hadoop using Java**: Oct 2015 - Dec 2015
  - Used large-scale US weather stations datasets, collected over a 4-year period.
  - Designed and implemented the application using MapReduce and figured out which state has the most stable temperature.