Oran CanÖren

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education

Sabanci University
Istanbul, Turkey
Computer Science, B.Sc

Cumulative GPA
3.00 / 4.00

Expected Graduation
Summer '19

experience

Distributed Systems Intern Jun '18 - Sep '18
SAP *Istanbul, Turkey*
- Developed an integration test framework for Kubernetes environments.
- Carried out penetration tests to a web front of SAP using a variety of tools.

Undergraduate Researcher Jul '17 - Dec '17
Sabanci University *Istanbul, Turkey*
- Increased cache utilization of the CPD algorithm on sparse tensors by computing an isomorphism of massive sparse tensors
- Worked extensively with C++ on a high performance cluster

technologies

Programming (proficient)	C++, Python
Programming (familiar)	Javascript, C#
Frameworks & Libraries	MERN Stack
Databases	SQL, neo4j
High Performance	OpenMP, CUDA
Data Science (familiar)	Tensorflow v1, Scikit
Dev ops (familiar)	Docker, Kubernetes

non-technical

Electronic Music Production

Producing electronic music in a wide range of genres since freshman year using FL Studio and wavetable synthesizers including Xfer Serum. Lately producing in techno, tech house and trance genres. My unofficial releases are listed under Soundcloud.

Discography
Leviticus, single by Oran, January 2019
Spotify URI: spotify:artist:4exEVKBQWw9Um5YVokda91

Vector Illustration & Video Editing

Illustrated cover arts and edited music videos using Adobe Illustrator and FL Studio visualization tools.

Piano

Playing and learning classical piano since freshman year. Played from Chopin, Bach, Haendel and more. Comfortable with all heptatonic scales and their arpeggios.

projects

GPU Parallel Homomorphic Deep Neural Network Framework Summer '19
solo project
C++, CUDA, Microsoft SEAL
A privacy preserving machine learning API using Microsoft SEAL encryption library. The API supports models ranging from polynomial regressors to deep neural networks. Employs CUDA capabilities for shorter training times. Aims to solve the issue of user data privacy in cloud based data analytics platforms. Currently ongoing.

Movify Spring '18
CS 308 - Software Engineering *team of 5*
Node.js, PostgreSQL, Docker, React Native
A mobile application for users to keep track of movies they have watched and will watch. Worked in a team of five employing agile software development practices involving version control through Git and sprint planning through JIRA. Carried out code reviews and used continuous integration.

Cryptoran Jan '18
Python 3 *solo project*
An open source crypto library supporting block ciphers, pkc, signatures and key exchange protocols. Implemented cryptographic pritmitives include AES-128, DES, RSA-OAEP, El Gamal. Can be used as a command line tool or a python 3 package. Available on PyPi pip.
pypi.org/project/cryptoran

Parallelized Private Information Retrieval Fall '17
CS 411/507 - Cryptography *team of 4*
C++, OpenMP
Implemented a recently proposed PIR scheme based on Damgard-Jurik cryptosystem, utilizing parallelization on CPUs. Users are able to retrieve the files they request without disclosing the plain identity of the file, using homomorphic encryption.

Distance 2 Graph Coloring (GPU & CPU) Fall '17
CS 406/531 - Parallel Computing *team of 4*
C, C++, OpenMP, CUDA
Implemented multiple distance-1 and distance-2 graph coloring algorithms working in parallel. CPU, GPU and heterogeneous parallelization was done. Written LaTeX reports discussing the performance.