NAZIR NAYAL

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EDUCATION

Koç University   September 2017 - May 2021
Bachelor of Science, Computer Engineering Senior.   *Istanbul, Turkey*
- Full scholarship funded by Al Ghurair Foundation (AGFE).

Al-Bassel High School for Superiors   September 2013 - June 2016
High School Diploma   *Aleppo, Syria*
- Ranked 5 th in Aleppo and among top 5% in Syria.

RESEARCH INTERESTS

- Developing and Utilizing Deep Learning models in Computer Vision and in Natural Language Processing.
- Representation Learning for vision and language understanding problems.

WORK EXPERIENCE

Invent Analytics   July 2020 - September 2020
Software Engineering Intern   *Istanbul, Turkey*
- Implemented a machine learning forecasting model for supermarket sales.

Distributed Systems and Reliable Networks Research Laboratory (DISNET)   March 2019 - Present
Research Intern   *Istanbul, Turkey*
- Implemented Proof of Concept for LightChain, and an augmented version of Skip Graph Data Structure.

Dapper Labs (Based in Vancouver, Canada)   August 2019 – December 2019
Software Engineering Intern   *Remote*
- Contributed to the implementation of the first version of the networking layer of Flow Blockchain.

Koç University Office of Learning and Teaching (KOLT)   February 2019 – June 2019
Tutor   *Istanbul, Turkey*
- Provided weekly individual tutoring for students of Advanced Programming class on a walk-in basis.

RELEVANT COURSEWORK

- Intro. to Machine Learning
- Software Engineering
- Advanced Data Analysis
- Deep Learning for Comp Vision
- Intro to AI
- Algorithms and Complexity

PUBLICATIONS

- Y. Hassanzadeh-Nazarabadi, **N. Nayal**, S. Sameh Hamdan, Ö. Özkasap, and A. Küpçü, "A containerized proof-of-concept implementation of lightchain system," in ICBC. IEEE, 2020.
- Y. Hassanzadeh-Nazarabadi, **N. Nayal**, S. Sameh Hamdan, A. Utkan Şahin, Ö. Özkasap, and A. Küpçü, "Demo: Skip Graph Middleware Implementation", in SRDS 2020.

ACHIEVEMENTS

Al Ghurair Foundation for Education STEM scholarship Program (AGFE)   September 2017 - Present
Recipient   *Istanbul, Turkey*
- A merit-based award for highly achieving Arab students.
- Admitted among ≈ 100 students out of 15000+ applicants to pursue Computer Engineering at Koç University.

Vehbi Koç Scholar Award   2018 - 2019 - 2020
Award Recipient   *Istanbul, Turkey*
- Received this award for 3 consecutive years for maintaining a semester GPA of 3.5+.

IEEEXtreme 13.0 Programming Contest   October 2019
Contestant   *Online*
- Ranked 67th globally and 2nd among teams participating from Turkey.

Turkish Programming Contest (TPC)   September 2019
Contestant   *Istanbul, Turkey*
- Represented Koç University and ranked 12th teams participating from all over Turkey.

SKILLS

- **Technical**: Deep Learning, Algorithms & Data Structures, Software Design, Blockchain, Agile Development.
- **Programming Languages**: C++, Python, Java, Golang, C, R, Matlab, Javascript.
- **Languages:** Arabic (native), English (fluent), French (intermediate), Turkish (intermediate).

PROJECTS

Examination of Attention Mechansim for Visual Feature Encoding (Ongoing)
Research / Course Project
- Working on developing a Deep Learning Model that utilizes Attention Mechanism to obtain better feature representations of visual data.

Sales Forecasting for Walmart Products
Internship Project
- Designed A machine learning pipeline that predicts the sales for different products in Walmart.

Amazon Food Review Sentiment Analysis
University Course Project
- Implemented a multi-label classification model to classify the sentiment of food review comments using an LSTM neural network architecture using PyTorch framework.

File System Memory Allocation Algorithm
University Course Project
- Implementation of Contiguous Allocation and Linked Allocation algorithms in C++.

Air Traffic Control Simulation
University Course Project
- A simulation software for an air traffic control using pthreads interface in C++.

LightChain: Proof of Concept Implementation
Research Project
- Implemented POC of LightChain System, a blockchain architecture developed at KU.

Bricking Bad
University Course Project
- A desktop game similar to the famous brick breaking game, but with different rules and features.

EXTRACURRICULAR ACTIVITIES

International Blockchain Olympiad 2020   July 2020
Participant   *Online (due to Covid-19)*
- Presented our Proof of Concept implementation of LightChain as part of DISNET Research Team.

Koç University Programming Championship (KUPC)   January 2020 - Present
Problem Setter & Chief Judge   *Istanbul, Turkey*
- KUPC is an ACM-ICPC style programming competition for Koç University students.
- Created and tested problems, and prepared competition system.

Koç University ACM Student Chapter (KUACM)   May 2019 - August 2020
Vice President   *Istanbul, Turkey*
- Managed and organized programs and activities carried out under that chapter's supervision.

Koç University Algorithms Program (KUAP)   January 2019 - Present
Founder & Coordinator & Instructor   *Istanbul, Turkey*
- Created a curriculum that covers basics of problem solving using algorithms and data structures.
- Led discussions and problem solving sessions demonstrating concepts and solutions to problems.

inzva Algorithmic Competition Winter Camp 2019   January 2019
Participant & Contestant   *Istanbul, Turkey*
- Ranked 1st in final day contest after a week long intensive training on algorithms and data structures.