

NAZIR NAYAL

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EDUCATION

Koç University <i>Bachelor of Science, Computer Engineering Senior.</i> <ul style="list-style-type: none">Full scholarship funded by Al Ghurair Foundation (AGFE).	September 2017 - May 2021 <i>Istanbul, Turkey</i>
Al-Bassel High School for Superiors <i>High School Diploma</i> <ul style="list-style-type: none">Ranked 5th in Aleppo and among top 5% in Syria.	September 2013 - June 2016 <i>Aleppo, Syria</i>

RESEARCH INTERESTS

- Machine Learning and Data Science approaches to real-life problems (NLP, Comp. Vision, Forecasting).
- Design of Algorithms and Data Structures to solve computational and constrained problems.
- Developing software architectures to optimize system performance.

WORK EXPERIENCE

Invent Analytics <i>Software Engineering Intern</i> <ul style="list-style-type: none">Implemented a machine learning forecasting model for supermarket sales.	July 2020 - Present <i>Istanbul, Turkey</i>
Distributed Systems and Reliable Networks Research Laboratory (DISNET) <i>Research Intern</i> <ul style="list-style-type: none">Implemented Proof of Concept for LightChain, a DHT-based Blockchain.Managed the implementation of an augmented version of Skip Graph DHT along with 2 other projects.	March 2019 - Present <i>Istanbul, Turkey</i>
Dapper Labs (Based in Vancouver, Canada) <i>Software Engineering Intern</i> <ul style="list-style-type: none">Contributed to the implementation of the first version of the networking layer of Flow Blockchain.	August 2019 – December 2019 <i>Remote</i>
Koç University Office of Learning and Teaching (KOLT) <i>Tutor</i> <ul style="list-style-type: none">Provided weekly individual tutoring for students of Advanced Programming class on a walk-in basis.	February 2019 – June 2019 <i>Istanbul, Turkey</i>

RELEVANT COURSEWORK

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|-------------------------------------|--------------------------------|--------------------------------|
| • Intro. to Machine Learning | • Algorithms & Complexity | • Computer Architecture |
| • Advanced Data Science with Python | • Data Structures & Algorithms | • Database Management |
| • Software Engineering | • Operating Systems | • Struct. of Computer Programs |
| • Discrete Mathematics | • Advanced OOP | • Prob. & Random Var. |

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. (Accepted but not published yet)

ACHIEVEMENTS

Al Ghurair Foundation for Education STEM scholarship Program (AGFE) <i>Recipient</i> <ul style="list-style-type: none">A merit-based award for highly achieving Arab students.Admitted among ≈ 100 students out of 15000+ applicants to pursue Computer Engineering at Koç University.	September 2017 - Present <i>Istanbul, Turkey</i>
Vehbi Koç Scholar Award <i>Award Recipient</i> <ul style="list-style-type: none">Received this award for 3 consecutive years for maintaining a semester GPA of 3.5+.	2018 - 2019 - 2020 <i>Istanbul, Turkey</i>
IEEEExtreme 13.0 Programming Contest <i>Contestant</i> <ul style="list-style-type: none">Ranked 67th globally and 2nd among teams participating from Turkey.	October 2019 <i>Online</i>
Turkish Programming Contest (TPC) <i>Contestant</i> <ul style="list-style-type: none">Represented Koç University and ranked 12th teams participating from all over Turkey.	September 2019 <i>Istanbul, Turkey</i>

SKILLS

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

PROJECTS

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 - Present

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.