

HAMAD KHAN

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EDUCATION

Saint Louis University

Aug. 2018 - May 2022

Bachelors of Science in Computer Science, Minor in Mathematics

GPA: 3.86/4.0

Busch-Biondi Scholarship (\$40,000)

Coursework: Operating Systems, Programming Languages, Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, Computer Security, Databases, Software Design, Data Structures

EXPERIENCE

Saint Louis University | Python, SQL

Sep. 2020 – Present

Undergraduate Research Assistant

- Developed a program to collect the university's Netflow data and store it in a MySQL database.
- Apply reinforcement learning techniques that help the MPTCP path manager choose the optimal path connection.
- Use Mininet to develop Software Defined Networking systems and utilize Mahimahi to record and replay HTTP content over the emulated network conditions.

U.S. Bank | Java, SQL

June 2021 – Aug. 2021

Software Development Intern

- Wrote unit tests in order to detect fatal failures for comparisons between incoming batch files and the database.
- Automated the General Ledger which is responsible for the creation of 1500-3000 loans per month.
- Wrote the automation script that processes 100+ wire transactions per week.

U.S. Bank | Python

June 2020 – Aug. 2020

Software Development Intern

- Automated Jenkins job transfer time between development and production servers by 50% and removed opportunities for human error.
- Developed and deployed a troubleshooting tool that detects errors pertaining to scanned and printed documents.

PROJECTS

Dog Breed Visualization | Python, Pytorch, CV2, Numpy, Matplotlib

- Used CNN visualization techniques, Class Activation Mapping (CAM) and Gradient-Weighted CAM techniques to highlight differences in feature extraction between common pretrained models.
- Achieved 99% accuracy by utilizing transfer learning on ResNet18, GoogleNet, AlexNet, VGGNet.

Scene Recognition | Python, CV2, Numpy, Scipy, Skimage

- Implemented the Bag of Visual Words technique in correspondence with kNN to classify images.
- Achieved 77% accuracy using Harris keypoints and Chi² distance.

CoWalker | React Native, Firebase, Google Maps

- App developed during UMSL Hackathon that allows students to connect and walk safely around campus.
- Compares way points and destinations to suggest similar student routes depending on the match ratio.

LEADERSHIP

L'Avenir Tutoring |

Jan. 2019 – May 2021

Chief Communications Officer

- Created the website which allows parents and students to sign up, and also shows the weekly tutoring schedule.
- Spearheaded the effort to host online tutoring sessions due to Covid-19, outlined and supervised the transition method for virtual tutoring.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, Kotlin, R, Haskell

Tools/Frameworks: Flask, Git, Linux, TestNG, Maven, Node, React