**YASH SHREESH DUBEY**

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Education

**Master of Science**, Computer Science *Aug 2018 - May 2020*

The University of Texas at Arlington **GPA: 3.42**

* Specializing in ***Intelligent Systems (Artificial Intelligence) and Database***.
* Coursework: Artificial Intelligence I, Machine Learning, Computer Vision, Neural Networks, Data Mining, Big Data Analytics, Data Analysis & Modeling Techniques, Design & Analysis of Algorithms, Software Testing, Distributed Systems.

**Bachelor of Engineering**, Computer Science and Engineering *Jun 2013 - May 2017*

RTM Nagpur University

Work Experience

**Machine Learning Research Intern,** The University of Texas at Arlington *Jul 2020 - Present*

* Pursuing research to solve complex computer vision problems like “3D Hand Pose Estimation” and “Assessing Cognitive skills in Children through Performance in Physical and Computer-based Tasks”.
* Developing an algorithm for the depth estimation task used to generate a 3D orientation of the given input hand shape using PyTorch.
* Analyzed large datasets and worked with raw sensor data by performing data collection, data annotation and data preprocessing tasks.

**Software Developer,** *LeanQuality Solutions (I) Pvt. Ltd. Jun 2017 – Jul 2018*

* Designed and Developed various web applications using a variety of languages, frameworks, and databases such as ReactJS, Python, Java, NodeJS, Django, Spring Boot and MySQL or MongoDB.
* Collaborated with a team of experts to design and develop various SaaS-based E-commerce, Healthcare and Banking & Finance applications.
* Overhauled the client’s website by regularly maintaining and enhancing code using best software engineering practices and upgraded existing design using material design component.
* Reduced the API response time by 35-45% by optimizing database and implementing proper caching configurations.
* Modelled extensive test coverage for all new features which reduced customer complaints by 24%.

Project Experience

# Texas Hamburger Co. Admin API *[Java, Spring Boot, Kafka, Docker, MongoDB, MySQL] Dec 2020 – Feb 2021*

# A fully functioning and well-documented *microservice architecture-based REST API* designed and developed in *Java using Spring Boot* to manage the administrative tasks for locations, menu, and reservations for a restaurant built on top of a *MongoDB* database with necessary security infrastructure using *Spring Security with Role-based Authentication*.

# Implemented *Kafka* to capture and store the execution details of API calls fetched from the *Spring HandlerInterceptor* interface into a *MySQL* database.

# Executed *pagination* capabilities for all GET requests using *Spring HATEOAS*.

# Scream - Social Media App *[React.js, Express.js, Node.js, Firebase**] Feb 2020 – May 2020*

# Designed, developed and deployed a full-stack application for a fully functioning social media application using *React.js* and *Material-UI* at the front-end with *Redux* to manage an application-wide state for all the components to fetch and send data to.

# Implemented the back-end using *Node.js* and *Express.js* to create a *REST API Server*. The user login and authentication, image uploads, notifications are stored and managed using Firebase’s *Cloud Firestore*.

**Chat Application** *[React.js, GraphQL, Node.js, MySQL] Dec 2019 – Mar 2020*

* Created a Real-Time Web-based Chat Application using React.js and Apollo Client at the front-end.
* The back-end was executed using Node.js, Apollo Server to configure a GraphQL API. The user registration, login and authentication, chats are stored and managed using MySQL server in combination with the Sequelize ORM.

**Monocular Depth Estimation** *[Python, Tensorflow] Oct 2019 – Jan 2020*

* Engineered an ***Encoder-Decoder style CNN architecture*** to create a supervised-learning model; that took as an input a Single RGB image taken from ***a Monocular Source*** and generate a ***Representation of its Spatial Structure*** to give a ***Depth Map*** as an output with an accuracy of ***92.93%***.

# Self-Driving Car *[Python, PyTorch, Kivy] May 2019 – July 2019*

* Built a ***Q-learning model*** over a ***4-Layered Deep Neural Network*** architecture to implement a Modelled Version of a Self- Driving Car that can successfully navigate itself in an environment.
* Concepts implemented to achieve this were ***Reinforcement Learning, Experience Replay and Action Selection Policies***.

Skills

**Programming Languages:** Python, Java, JavaScript, SQL (MySQL, PostgreSQL), NoSQL (MongoDB), R, C/C++, HTML/CSS.

**Libraries & Frameworks:** React.js, Express.js, Node.js, GraphQL, Spring Boot, Django, Flask, Firebase, REST, Spark, Hadoop, Git, TensorFlow, PyTorch, Numpy, Pandas, Scikit-learn, Matplotlib, SciPy, OpenCV, Kafka, NLTK, ggplot2, mlr, dplyr, tidyr.

**Cloud Platforms:** IBM Cloud, Microsoft Azure, Amazon Web Services (AWS) (SageMaker, S3, EC2), Google Cloud Platform (GCP).

**Hard Skills:** Data Analysis, Data Visualization, Shell Scripting, Probability & Statistics, Data Structures & Algorithms, Web Development.

**Soft Skills:** Teamwork, Detail Oriented, Adaptability, Problem-solving, Communication, Active Learning, Collaborative.

Research Paper Published

* ***Topic Detection by Clustering and Text Mining:*** International Research Journal of Engineering and Technology, Volume 4, Issue 3, March 2017.

Certifications & Awards

* Completed a 5 Course ***Specialization in Deep Learning*** taught by ***Prof. Andrew Ng*** offered by ***deeplearning.ai***.
* Secured **1st position** in "***Technobuzz***" (A national level coding competition).