

Kushal B Kusram

kushalbkusram@outlook.com | 248-802-7756 | linkedin.com/in/kushalbkusram | github.com/KushalBKusram

EDUCATION

University of Colorado Denver

M.S, Computer Science

Graduated: December 2020

GPA: 3.8/4.0

Visvesvaraya Technological University, India

B.E, Computer Science and Engineering

Graduated: June 2016

First Class Honors

CERTIFICATIONS

Deep Learning Specialization from Coursera, **Self-Driving Car Engineer** from Udacity, **IBM AI Engineering** from Coursera

RESEARCH EXPERIENCE

Computer Graphics and VR Lab – University of Colorado Denver

Sep 2019 – Dec 2020

Title: **Two-Phase Multimodal Image Fusion using Convolutional Neural Networks**

Advisor: **Dr. Min-Hyung Choi**, Professor and Director, Computer Graphics and VR Lab; Co-Director, CMTC

- Researched in computer vision, surveyed on **image fusion** and **machine learning**, identified problems with fusion.
- Developed data collection software in **C++**, collected and analyzed multi-modal data, investigated for valid patterns.
- Developed the depth-thermal perception tier in **Python**, **C++** and streamed live multi-modal data from the camera.
- Formulated **AccuFusion**, a **two-stage DL CNN** technique that increased multi-model image fusion accuracy by 18%.
- Deployed AccuFusion in **TensorFlow**, resulted in real-time accurate fusion of 3D thermographic data.

WORK EXPERIENCE

Benam Lab - University of Colorado Anschutz Medical Campus

Jun 2019 – Sep 2019

Intern – Software Developer

- Co-ordinated with Bio-Printer and Smoke-Simulator team, **maintained codebase** and **tested integration** of features.
- Coded Peltier software in **C++** for precise temperature control, integrated this feature into the Bio-Printer firmware.
- Conceptualized a unified hub with **Python** that streamlined Smoke-Simulator operations into a single control panel.
- Created UI in **Qt** for Smoke-Simulator Control Panel and improved ease-of-use of the device for the end-user.

University of Colorado Denver

Sep 2018 – May 2020

Graduate Teaching Assistant

- **Graded** and provided feedback on **C++** and **Java** programming assignments, advised students about their career.
- **Lectured** undergraduate level class of 40 students, **presented** on professional C++ and Java programming practices.

AeroSource India Private Limited

Mar 2017 – Jul 2018

Executive – Market Research

- **Established** digital presence and **communicated** IT needs to the top management for the sales and marketing team.
- Developed a database consolidation software in **Java** and **SQL**, gathered data of 2700 potential clients routinely.
- Designed, developed company website with **Bootstrap** and deployed using **cPanel**, secured first page **SEO** results.

Mphasis Private Limited

Jul 2016 – Sep 2016

Intern – Artificial Intelligence

- Developed Proof-of-Concept projects, enabled top management to consider introducing **AI** within their products.
- Developed an **NLP** model using **Python** and **CoreNLP**, classified and clustered legal documents with 87% accuracy.
- Predicted banking customer lifetime with **Scikit-Learn** model deployed with **Python**, attained 93% accuracy.
- Analyzed existing customer data, devised banking product recommender in **GraphQL** system with 90% accuracy.

SKILLS

Languages : C++, C#, Python3, Java

Frameworks : OpenCV, Keras, TensorFlow, OpenGL, Qt, PyTorch, Flask, Eigen, PCL, Boost, Django

Technologies : Bash, Git, AWS, Docker, Kubernetes, REST APIs

Processes : Agile, SCRUM and Kanban

Other : Windows, Visual Studio, PyCharm, Linux – Ubuntu, RaspbianOS, ROS