

MUKESH MITHRAKUMAR

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EDUCATION

Graduate Courses: Machine Learning, Deep Learning, Mathematics for Machine Learning, Intro to Computer Vision

B.S. IN PHYSICS; Emphasis Electrical Engineering | SOUTH DAKOTA STATE UNIVERSITY | 2015-2018

Courses | Digital Systems, Quantum Mechanics, Automatic Controls, Mathematical Physics, Linear Algebra, Scientific Computation, Algorithms.

Certifications | Machine Learning with TensorFlow on Google Cloud, **Google**. Grade: 97.5%
Data Engineering on Google Cloud Platform, **Google**. Grade: 99.6%

PROFESSIONAL EXPERIENCE

MACHINE LEARNING ENGINEER | ADHIRAIYAN AI CONSULTING | 09.18 – CURRENT | (1YR)

- Provide AI services for early-stage startups. Have worked on numerous projects from BigGAN for the entertainment industry, an algorithm to predict vehicle speed, object detection in aerial images, predictive model for a retail company to pill detection and classification algorithm for a startup.

DATA SCIENCE MENTOR | THINKFUL & SPRINGBOARD | 12.18 – CURRENT | (11 MOS)

- Teaching aspiring data scientists participating in Thinkful's & Springboards' Data Science Program on topics ranging from supervised learning to unsupervised learning.

MACHINE LEARNING SOFTWARE ENGINEER | DATA SCIENCE RETREAT | 05.18 – 11.18 | (7 MOS)

- Developed an open source software package to assist radiologists in the evaluation of lesions in CT and MRI scans for multiple organs.

UNDERGRADUATE RESEARCHER | SOUTH DAKOTA STATE UNIVERSITY | 10.15 – 01.17 | (1 YR 4 MOS)

- Synthesized a novel magnetic material, analyzed efficiency and tested electronic properties of the material that led to a Journal paper in Applied Physics.
- Implemented a multi-layer perceptron in FPGA using Verilog.

PROJECTS (Available in GitHub)

Google Open Images- Object Detection (Kaggle Top 100 - Bronze medal)

- Modified a RetinaNet package for Object Detection by training over 17 million images in Google Cloud.

Google AI Open Images – Visual Relationship Track (Kaggle Top 100 - Bronze medal)

- Implemented a Random Forest Classifier and Multi Output Classifier from sklearn and experimented with LSTM for Visual Relationship identification in Google Cloud.

Statoil/C-CORE Iceberg Classifier Challenge (Kaggle Top 16%)

- Built an ensemble convolutional neural network to identify a ship or an iceberg from a remotely sensed satellite using TensorFlow, OpenCV, SciKit and Keras for a Log Loss of 0.1574.

SKILLS

- **Programming Languages-** Python, Java, C, C++, JavaScript, Shell, SQL.
- **Deep Learning Frameworks-** TensorFlow, PyTorch, Keras, Pandas, OpenCV.
- **Machine Learning Frameworks -** SciKit-Learn, NumPy, SciPy, StatsModel.
- **Database Management-** Hadoop, Spark, MongoDB, Google Cloud SQL, Google BigQuery, Mongoose.
- **Web Development-** HTML, CSS, Bootstrap, jQuery, Node.js, Express.js.