

Damanpreet Kaur

DATA SCIENTIST · SOFTWARE ENGINEER

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Experience

Oregon State University

Corvallis, Oregon, USA

GRADUATE RESEARCH ASSISTANT

Dec 2019 — Present

- Working on a computer vision problem - interactive image segmentation.
- The main aim of this project is to enhance the user experience by reducing the number of clicks required to segment an object from the background. This algorithm will be deployed to the GUI for annotating images.
- Member of computer vision research group. We work with the Department of forestry at OSU to support their research in plant phenotyping by building and training deep learning and machine learning models.

Oregon State University

Corvallis, Oregon, USA

GRADUATE TEACHING ASSISTANT

Sep 2018 — Dec 2019

- Assisted the students to understand the Software Development Life Cycle and lead them to build a variety of projects.
- Responsible for grading the weekly assignments and reports by the third-year undergraduate students.

Infosys Limited

Pune, India

SENIOR SYSTEMS ENGINEER

Sep 2015 — Jul 2018

- Enhanced Westpac's financial-General ledger system, which uses Oracle E-business Suite (ERP) technology.
- Developed various inbound and outbound interfaces to process the transactions and post them into General Ledger using PL/SQL language, UNIX Scripting and Oracle AOL components.
- Mentored five employees by acquainting them to the Westpac landscape and helped them accomplish their tasks, as the need arose.

Projects

Topic modeling on Chip-Seq dataset (<https://github.com/LDA-collapsed-gibbs-sampling/LDA>)

FEB 2020-MAR 2020

- The project is aimed at applying Latent Dirichlet Allocation with collapsed Gibbs sampling to the Chip-Seq dataset across transcription factors (TF) to identify the interactions between TFs. Left-to-right and importance sampling evaluation techniques will be used to evaluate the model's perplexity.

TextMarkIt (<https://github.com/Damanpreet/TextMarkIt>)

JAN 2020-MAR 2020

- A web application to find similar paragraphs in a txt/pdf file using tf-idf. The application suggests paragraphs similar to what a user would like to read based on their previous selection. A user study will be conducted to evaluate the application with the competitors.

InVitro Segmentation

JAN 2020-FEB 2020

- Trained the Deeplab v3+ model to segment the plant traits. The segmented images are aligned with the hyperspectral images by calculating the homography matrix using optical flow. The pipeline is used for the detection of transgenic tissues in plant tissue cultures.

Plant Traits Segmentation

MAY 2019-JUNE 2019

- Trained the PSPNet model to segment the traits for plant growth analysis. Achieved a 79.40% Mean Intersection over Union(IoU) on the test dataset.

Bowl2Recipe (<https://github.com/BOWL2RECIPE>)

JAN 2019-MAR 2019

- Created an Android application that allows the users to check the recipe of the dish by uploading an image. Additionally, it allows users to search for the recipe using the recipe name or the ingredients.

Text2music (<https://github.com/Damanpreet/texttomusic>)

FEB 2019-MAR 2019

- This project was aimed at designing a model that learns to generate music by capturing the sentiments from the text.

Education

Oregon State University, USA

Current GPA: 3.91

MASTERS OF SCIENCE IN COMPUTER SCIENCE

Sep 2018 - Ongoing

Software Innovation Track with a focus on Machine learning and Deep learning. Courses: Machine Learning, Deep Learning, Software Project Management, Computer Vision, Natural Language Processing, Probabilistic Graphical Models

Guru Tegh Bahadur Institute of Technology, India

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE

Aug 2011 — May 2015

Courses: Data Structures, Software Engineering, Analysis of Algorithms, Artificial Intelligence

Technical Skills

FRAMEWORK: PYTORCH, TENSORFLOW, KERAS, OPENCV, SCIKIT-LEARN, MATLAB, LATEX, GIT

LANGUAGES: PYTHON, SQL, ORACLE PL/SQL, UNIX SCRIPTING

FAMILIAR WITH: AMAZON AWS, HADOOP, TABLEAU, C++, JAVASCRIPT, NODE.JS

Certifications

Coursera

DEEP LEARNING SPECIALIZATION

Dec 2018 - Apr 2019