Damanpreet **Kaur**

DATA SCIENTIST · SOFTWARE ENGINEER

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Summary

I am a graduate research assistant at Oregon State University and work with a research group in the College of Forestry. My responsibilities include training machine learning and deep learning models to support the research. I spend my extra time reading research papers and books to improve my skill-set.

Education

Oregon State University, USA   *Aggregate: 3.9/4.0*

MASTERS OF SCIENCE IN COMPUTER SCIENCE   *Sep 2018 — Jun 2020 (anticipated)*

Software Innovation Track with focus in Machine learning and Deep learning. Courses: Machine Learning, Deep Learning, Software Project Management, Computer Vision, Natural Language Processing

Guru Tegh Bahadur Institute of Technology, India   *Aggregate: 83%*

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE   *Aug 2011 — May 2015*

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

Experience

Oregon State University   *Corvallis, Oregon, USA*

GRADUATE RESEARCH ASSISTANT   *Dec 2019 — Present*

- Working with Professor Fuxin Li on an interactive segmentation project. This work is focused on developing a new interactive segmentation model to improve the accuracy on this task and reduce the amount of user interaction required.

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 in different areas including machine learning, Computer vision, natural language processing, android, web development.
- 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.
- Introduced some innovative ideas in the Tax Country by Country project which helped save the client around 60k AUD.
- Mentored five employees by acquainting them to the Westpac landscape and helped them accomplish their tasks, as the need arise.

Projects

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

FEB 2020-ONGOING

- 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 perplexity.

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

JAN 2020-ONGOING

- 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.

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 plants 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 allow 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.

Certifications

Coursera

DEEP LEARNING SPECIALIZATION   *Dec 2018 - Apr 2019*

Technical Skills

FRAMEWORK: PYTORCH, TENSORFLOW, KERAS, OPENCV, SCIKIT-LEARN, MATLAB, LATEX, GIT
LANGUAGES: PYTHON, PL/SQL, UNIX SCRIPTING, C, C++, R, SQL, POWERSHELL SCRIPTING