NUS National University of Singapore | Advanced Computing for Executives
School of Computing

10th August 2023

«NAME»
«COLLEGE»
«CITY»

Dear «Name_1»,

Subject: Letter of Evaluation

This is with reference to the Global Academic Internship Programme (GAIP) conducted by Corporate Gurukul from 1st July 2023 to 22nd July 2023 on 'Big Data Analytics using Deep Learning'. The course work for internship included the following:

Introduction to Data Analytics

- Introduction to Data Analytics
- What is Data Analytics
- Types of Data Analytics
- Data in Data Analytics + Decision Models – Data Mining Process
- Exploratory Data Analysis
- Data Visualization
- Data Querying
- Statistical Methods for Summarizing Data – Exploring Data using Pivot Tables

Descriptive Statistical Measures

- What is Descriptive Analytics?
- Populations and Samples
- Measures of Location
- Measures of Dispersion
- Measures of Shape
- Measures of Association

Introduction to Regression Analysis

- Simple Linear Regression
- Multi Linear Regression
- Stepwise Regression
- Coding Scheme for Categorical Variables
- Problems with Linear Regression

Introduction to Classification

- Classification
- Decision Trees
- Bayesian Classifier
- Logistic Regression
- Support Vector Machine
- Separating Hyperplane
- Maximal Margin Classifier
- Support Vector Classifier
- Resampling Methods

Introduction to Clustering

- Affinity Measures and Partition Methods
- K-means
- K-medoids
- Hierarchical Methods
- Introduction to Association
- Structure and Representation of Association Rules
- Strong Association Rules and the Concept of Frequent Item sets – Apriori Algorithm
- FP Growth
- Time Series Analysis

Introduction to Text Mining

- Text Mining Terminologies
- Text Mining Concepts
- Text Mining Process
- Knowledge Extraction Methods for Text Mining
- Classification
- Clustering
- Association

Artificial Neural Networks (ANN)

- Overview of ANN
- Why ANN?
- Back-propagation

Artificial Neural Networks (ANN)

- Gradient descent algorithm (GD)
- Difficulties of training ANN
- Advanced GD algorithm
- Other training techniques of ANN

Convolutional Neural Networks (CNN)

- Convolution, pooling operations
- Popular CNN architectures

Applications of CNN in Python

- Recurrent Neural Networks (RNN)
- Vanilla RNN
- LSTM and GRU
- Applications of RNN in Python

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Your performance in GAIP was evaluated based on theoretical understanding and application of concepts in practical data analysis with GRADE «GRADE».

We encourage you to further your knowledge, skills and research in the above areas and wish you the very best for a career ahead!

Sincerely,

Dr Tan Wee Kek
Associate
Professor
DISA, School of Computing
National University of Singapore

Dr Amirhassan Monajemi
Senior Lecturer
DISA, School of Computing
National University of Singapore

Samantha Sow

Ms. Samantha Sow Senior
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TRANSCRIPT

GLOBAL ACADEMIC INTERNSHIP PROGRAMME JULY 2023 BIG DATA ANALYTICS USING DEEP LEARNING	
Name: «NAME»	Date: 10th August 2023

Assessment Component	Score	Topic/Parameter
In-Class Assessment	«Q1»/40	Introduction to Data Analytics and Descriptive Statistical Measures
	«Q2»/40	Introduction to Python Data Science Libraries, Regression Analysis & Classification
	«Q3»/40	Artificial Neural Networks
	«Q4»/40	Convolutional Neural Networks and Recurrent Neural Networks
Final Comprehensive Assessment	«FT»/80	Comprehensive Assessment for the Course
Project Assessment	«FA»/50	Final Project Work

	Assessment			Overall Percentage (Out of 100%)
	In-Class Assessment	Final Comprehensive Assessment	Project Assessment	«Out_of_100»
	30% weightage	20% weightage	50% weightage	Grade
Percentage	«M_30»/30	«M_20»/20	«M_50_»/50	«GRADE»
Faculty Assessor Signature				*Samantha Sow*
Faculty Assessor Name	Dr Tan Wee Kek	Dr Amirhassan Monajemi		Prof Samantha Sow

Grading Guideline:

O	100 - 90	B	54.9 - 50
A+	89.9 - 80	B-	49.9 - 45
A	79.9 - 70	C	44.9 - 40
A-	69.9 - 60	F	<40
B+	59.9 - 55		