

**2018/2019 SESSION****SEMESTER I**

| <b>No.</b>         | <b>Name</b>                               | <b>Student ID</b> | <b>Research Title</b>  | <b>Supervisor</b>                     |
|--------------------|---|-------------------|--|---------------------------------------|
| 1.                 | Aneesha Pillay A/P<br>Balachandran Pillay | SQB170001         | Forecasting Mortality Rates Using the Lee-Carter Model and Its Extension   | Dr. Dharini A/P Pathmanathan          |
| 2.                 | Avy Lau Hui Chwin                         | SQB170005         | Estimating and Forecasting Volatilities with Range-Based Estimators Using Weighted Threshold Conditional Autoregressive Range Models | Dr. Ng Kok Haur                       |
| 3.                 | Chen Kah Wen                              | SQB170004         | Predictive Analytics for an Auto Insurance Claim Problem   | Dr. Khang Tsung Fei                   |
| 4.                 | Chin Tsung-Rern                           | SGD160002         | The Modified Lee-Carter Model with Linearized Cubic Spline Parameter Approximation for Malaysian Mortality Data                      | Dr. Dharini A/P Pathmanathan          |
| 5.                 | Hemma A/P R. Permal                       | SGD160013         | Bayesian Structural Time Series Model and Its Application  | Dr. Adriana Irawati Nur Binti Ibrahim |
| 6.                 | Tan Siow Yun                              | SQB170007         | Modelling and Forecasting Integer-Valued Data Using INGARCH-Type Models  | Dr. Ng Kok Haur                       |
| <b>SEMESTER II</b> |   |                   |  |                                       |
| 1.                 | Cui Zhuang                                | SQB170013         | Ridge Regression Approach in Logistic Regression Model   | Dr. Nur Anisah Binti Mohamed          |
| 2.                 | Lim Chia Yeh                              | SQB170003         | Missing Covariate in Survival Analysis by the Method of Multiple Imputation and Inverse Probability Weighting                        | Dr. Nur Anisah Binti Mohamed          |

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|----|-------------------------|-----------|---|------------------------------|
| 3. | Nur 'Aisyah Binti Nasir | SQB170009 | Analysis of Slope Soil Erosion at Different Vegetation Densities and An Investigation of Development of Plant Growth via Mixed Model and Lasso for Its Collinearity | Dr. Nur Anisah Binti Mohamed |
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**2019/2020 SESSION****SEMESTER I**

| <b>No.</b> | <b>Name</b>                      | <b>Student ID</b> | <b>Research Title</b>   | <b>Supervisor</b>                     |
|------------|----------------------------------|-------------------|---|---------------------------------------|
| 1.         | Nurzafirah Hani Binti Mohd Yahya | SQB170010         | Bayesian Approach to Error-in-Variables in Poisson Regression Model | Dr. Adriana Irawati Nur Binti Ibrahim |
| 2.         | Shafiqah Binti Azman             | SQB180001         | Generalized Nonlinear Model Approach in Mortality Modelling         | Dr. Dharini A/P Pathmanathan          |
| 3.         | Zetty Izzati Binti Zulki Alwani  | SQB180003         | Spatial Outlier Detection   | Dr. Rossita Binti Mohamad Yunus       |

**SEMESTER II**

|    |                                      |            |  |                                 |
|----|--------------------------------------|------------|--|---------------------------------|
| 1. | Azimah Binti Ahmad                   | 17020888/1 | Influential Measures and Its Application on Surgical Gloves Dataset            | Dr. Nur Anisah Binti Mohamed    |
| 2. | Maizatul Fashahah Binti Zulkifli     | 17014221/1 | Spatial Temporal Modelling of PM10 with Climatological Predictor Variables     | Dr. Rossita Binti Mohamad Yunus |
| 3. | Norhasnidah Binti Zainal Abidin      | 17058609/1 | A Generalized Additive Model Approach in Soil and Plant Quality Data           | Dr. Nur Anisah Binti Mohamed    |
| 4. | Siti Fatimatul Rahmah Binti Abdullah | 17021688/3 | Meta-regression Analysis for Modelling and Forecasting Environmental Parameter | Dr. Rossita Binti Mohamad Yunus |

**2020/2021 SESSION****SEMESTER I**

| <b>No.</b> | <b>Name</b>  | <b>Student ID</b> | <b>Research Title</b>   | <b>Supervisor</b>   |
|------------|--------------|-------------------|---|---------------------|
| 1.         | Chai Hui Xin | 17060479/2        | Absolutely Continuous Bivariate Kumaraswamy Distribution                                    | Dr. Ng Choung Min   |
| 2.         | Wong Tat Yau | 17043975/1        | A Bayesian Deep Learning Approach to Image Analysis using the Variational Autoencoder Model | Dr. Khang Tsung Fei |

**SEMESTER II**

|     |                                |            |  |                                       |
|-----|--------------------------------|------------|--|---------------------------------------|
| 1.  | Bahaa I. H. AlShantti          | 17219466/1 | Parameter Estimation for Symmetric Circular Distributions  | Dr. Ng Choung Min                     |
| 2.  | Bi Wei                         | 17198618/1 | Estimating Stock Volatility and Return: An Approach Based on Parkinson Measure and CARR Model            | Assoc. Prof. Dr. Ng Kok Haur          |
| 3.  | Farah Najwa Binti Mohd Ghazali | 17218230/1 | Statistical Modelling of Covid-19 Cases in Malaysia  | Dr. Ng Choung Min                     |
| 4.  | Koay Hui Yin                   | 17198497/1 | Modelling of Air Pollution-Related Diseases in Malaysia  | Dr. Adriana Irawati Nur Binti Ibrahim |
| 5.  | Lau Chia Chong                 | 17177644/2 | Predictive Maintenance Using the Attention Model in Deep Learning  | Dr. Khang Tsung Fei                   |
| 6.  | Lee Chiau Hung                 | 17014323/1 | Style Analysis of Malaysian Stock Market using Bayesian Network  | Dr. Adriana Irawati Nur Binti Ibrahim |
| 7.  | Nurul Alia Binti Mohamed       | 17201989/1 | Risk Factors for Cervical Cancer: A Classification and Regression Tree Approach using GUIDE              | Dr. Khang Tsung Fei                   |
| 8.  | Sun Mengyuan                   | 17222027/1 | Detecting Credit Card Fraud using Machine Learning Methods   | Dr. Khang Tsung Fei                   |
| 9.  | Tan Keok Hua                   | 17159111/2 | Continuous Vector Representation in Recommendation System: A Case Study Using the Amazon Reviews Dataset | Dr. Khang Tsung Fei                   |
| 10. | Wei Silu                       | 17220997/1 | Forecasting the Transmission of COVID-19 Using Long Short-Term Memory Networks                           | Dr. Adriana Irawati Nur Binti Ibrahim |

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|-----|--------------|------------|--|------------------------------|
| 11. | Wei Yau Chee | S2003688/1 | Understanding Post-Chernobyl Radiocaesium Contamination in the United Kingdom: A Data Science Approach | Dr. Khang Tsung Fei          |
| 12. | Zhou Jingjia | 17221250/1 | Modified Location Control Charts for Monitoring Skewed Process   | Assoc. Prof. Dr. Ng Kok Haur |

**2021/2022 SESSION****SEMESTER I**

| <b>No.</b> | <b>Name</b>                 | <b>Student ID</b> | <b>Research Title</b>   | <b>Supervisor</b>  |
|------------|-----------------------------|-------------------|---|--|
| 1.         | Chong Hin Chun              | 17202141/1        | Stochastic Claims Reserving in General Insurance  | Dr. Koh You Beng   |
| 2.         | Farhana Afiqah Binti Adinan | 17202252/1        | Modelling Daily Covid-19 New Cases in Malaysia: Using GLM Method for Autoregressive Process with Log Link | Dr. Rossita Binti Mohamad Yunus  |
| 3.         | Jing Yu                     | S2018018/1        | Market Segmentation Analysis of E-Commerce Data from an Online Store                                      | Assoc. Prof. Dr. Khang Tsung Fei                                       |
| 4.         | Mun Kit Chin                | S2021029/1        | Unsupervised Segmentation of Credit Event Data: A Case Study Using the German Credit Data                 | Assoc. Prof. Dr. Khang Tsung Fei                                       |
| 5.         | Qian Yi Chang               | S2017947/1        | Modelling Time Series of Counts with Overdispersion: A Comparative Study with Applications                | Assoc. Prof. Dr. Ng Kok Haur   |
| 6.         | Sie Kim Ting                | S2003723/1        | Confidence Region for the Difference Between Two Means of Multivariate Complex Normal Distribution        | Dr. Adriana Irawati Nur Binti Ibrahim & Dr. Norli Anida Binti Abdullah |
| 7.         | Zi Yun Chow                 | S2021566/1        | Application of Markov Regime Switching Model on Export-Led Growth in Malaysia                             | Dr. Koh You Beng   |

**SEMESTER II**

|    |                        |            |  |  |
|----|------------------------|------------|--|--|
| 1. | Hafiz Arif Abdul Razak | S2024387/1 | Application of Covratio Statistics to Detect the Outliers in the 2000-2019 Crescent Moon Data of Teluk Kemang Malaysia | Profesor Dr. Ibrahim Bin Mohamed & Dr. Siti Fatimah Binti Hassan |
| 2. | Izzati Izyani Japar    | S2016848/1 | Bitcoin Price Fluctuation by Twitter Sentiment Analysis  | Dr. Dharini A/P Pathmanathan                                     |

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|----|---------------------|------------|--|--------------------------------------|
| 3. | Kah Xuan Lim        | S2111260/1 | On the Recognition of Chinese Calligraphy Characters Using Classical and Deep Learning Approaches                    | Assoc. Prof. Dr. Khang Tsung Fei     |
| 4. | Leilei Zhang        | S2102959/1 | An Empirical Study of the Efficacy of Correcting Batch Effects in RNA-SEQ Gene Expression Data Using Combat-Seq      | Assoc. Prof. Dr. Khang Tsung Fei     |
| 5. | Ruby Devi Ram Singh | 17061603/2 | Assigning Taxonomic Domain and Organelle Type Using Codon Composition Data: A Machine Learning Approach              | Assoc. Prof. Dr. Khang Tsung Fei     |
| 6. | Zheng Er Tan        | S2018636/1 | A Comparative Study for Best Subset Selection Methods in the Presence of Multicollinearity and Outlying Observations | Profesor Dr. Nor Aishah Binti Hamzah |

**2022/2023 SESSION****SEMESTER I**

| <b>No.</b> | <b>Name</b>                     | <b>Student ID</b> | <b>Research Title</b>   | <b>Supervisor</b>   |
|------------|---------------------------------|-------------------|---|---|
| 1.         | Ajmal Tahani Binti Ahmad Rahimi | S2128849/         | The Analysis of the COVID-19 Patient's Mortality Risk Using Machine Learning and Deep Learning Method                                   | Assoc. Prof. Dr. Rossita Binti Mohamad Yunus  |
| 2.         | Alex Daniel A/L Krishnan        | 17218366          | Sentiment Analysis of Cryptocurrency Using News Headlines   | Dr. Dharini A/P Pathmanathan  |
| 3.         | Fan Chin Yik                    | S2102156          | Estimating Customer Lifetime Value for an Online Maternity Product Store  | Assoc. Prof. Dr. Khang Tsung Fei  |
| 4.         | Jingyi Jiang                    | S2109782          | Functional Analysis of Variance (FANOVA) of Biomechanics Knee Gait Data   | Dr. Nur Anisah Binti Mohamed  |
| 5.         | Kim Xiong Ng                    | S2040416          | Control Chart for Monitoring Fraction Nonconforming: A Comparative Study Based on Beta, Kumaraswamy, and Generalized Beta Distributions | Assoc. Prof. Dr. Ng Kok Haur  |
| 6.         | Kok Soon Lim                    | S2105424          | New Marshall-Olkin Extended Lifetime Distributions  | Dr. Ng Choung Min   |
| 7.         | Lei Ma                          | S2122211          | Investigation on the Relationship Between Solar Activity and Large Earthquakes Worldwide  | Dr. Nur Anisah Binti Mohamed  |
| 8.         | Sarkaa Singh                    | S2104193/1        | Volatility Modelling with Contemporary HAR Models and Exogeneous Variables, with Deep Learning  | Assoc. Prof. Dr. Ng Kok Haur & Dr. Koh You Beng                                     |
| 9.         | Wai Han Kan                     | S2109410          | Statistical Modelling to Estimate Total Corneal Astigmatism: A Comparative Study on Linear Models                                       | Assoc. Prof. Dr. Adriana Irawati Nur Binti Ibrahim & Dr. Norli Anida Binti Abdullah |
| 10.        | Veng Fung Wan                   | 17218327          | Predictive Analytics for Transportation Data: A Case Study of the New York Taxi and Limousine Commission Dataset                        | Assoc. Prof. Dr. Khang Tsung Fei  |

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| 11.                | Yan Bowen               | S2032670   | Modelling and Forecasting GDP Growth Using VAR Model  | Assoc. Prof. Dr. Ng Kok Haur & Dr. Koh You Beng    |
| 12.                | Yiwei Ang               | S2038462   | PGF-Based Parameter Estimation for INAR(1) Series   | Dr. Ng Choung Min                                  |
| 13.                | Yurui Tu                | S2104704   | The Mixed Weibull-Gamma Distribution for Worldwide Large Earthquake Frequency                             | Dr. Nur Anisah Binti Mohamed                       |
| 14.                | Zedi Chen               | S2110957   | Minimum and Maximum of Two Independent Discrete Exponential Family (DEF) Random Variables                 | Dr. Ng Choung Min                                  |
| <b>SEMESTER II</b> |                         |            |   |  |
| 1.                 | Andrianna Chin Sze Teng | 17058277/1 | Model Fitting and Forecasting of Malaysia's Future Infant Mortality Rate                                  | Dr. Nur Anisah Binti Mohamed                       |
| 2.                 | Marc Phoon Kun-Phang    | S2042697   | Multilevel Modelling of Occupation Effects on Wages in Malaysia   | Assoc. Prof. Dr. Adriana Irawati Nur Binti Ibrahim |
| 3.                 | Ding Jin Wei            | S2102823   | Deep Learning Based Portfolio Optimisation for the Modified Dow Jones Industrial Average Portfolio        | Dr. Dharini A/P Pathmanathan                       |
| 4.                 | Jiahao Cheng            | S2125485   | Portfolio Optimisation for Chinese Companies Traded on U.S. Stock Exchanges during the COVID-19 Era       | Dr. Dharini A/P Pathmanathan                       |
| 5.                 | Xu Guo                  | S2130902   | Bayesian Circular-Linear Regression with Applications   | Assoc. Prof. Dr. Adriana Irawati Nur Binti Ibrahim |
| 6.                 | Qian Wang               | S2141962   | Forecasting Volatility via GARCH Models with Different Innovations: A Comparative Study with Applications | Assoc. Prof. Dr. Ng Kok Haur                       |
| 7.                 | Wenwen Hou              | S2149921   | A Comparative Study of Machine Learning and Time Series to Improve Earthquake Frequency Prediction        | Dr. Nur Anisah Binti Mohamed                       |

**2023/2024 SESSION****SEMESTER I**

| <b>No.</b> | <b>Name</b>                   | <b>Student ID</b> | <b>Research Title</b>   | <b>Supervisor</b>                                  |
|------------|-------------------------------|-------------------|---|--|
| 1.         | Hasnor Lot                    | S2039937          | A Decision Tree Approach for Heart Disease Prediction using the Behavioral Risk Factor Surveillance System Data                   | Assoc. Prof. Dr. Khang Tsung Fei                   |
| 2.         | Teh Xian Zhi                  | S2102190          | A Comparative Analysis of Frequentist and Bayesian GLMs: Application to Air-Pollution Related Disease                             | Assoc. Prof. Dr. Adriana Irawati Nur binti Ibrahim |
| 3.         | Runge Sun                     | S2107529          | Comparisons between Survival Machine Learning with Survival Cox Proportional Hazards Models using Non-cirrhotic Liver Cancer Data | Dr. Nur Anisah Binti Mohamed                       |
| 4.         | Mingjun Tang                  | S2114064          | Modelling World Oil Price and China's Macroeconomy using Vector Autoregression Model  | Assoc. Prof. Dr. Ng Kok Haur & Dr. Koh You Beng    |
| 5.         | Chin Mee Ling                 | S2119841          | Sales Analytics in E-Commerce Data: A Case Study of the Brazilian Olist Store   | Assoc. Prof. Dr. Khang Tsung Fei                   |
| 6.         | Tushil Kumar R. Radhakrishnan | S2123621          | Analysis of Functional Linear Regression with Truncated Signatures  | Dr. Dharini A/P Pathmanathan                       |
| 7.         | Jiali Tian                    | S2126002          | Survival Analysis Frailty Model on Heart Failure  | Dr. Nur Anisah Binti Mohamed                       |
| 8.         | Zhao Xiu                      | S2141305          | On the Prediction of Mental Health Status using Psychological, Physiological and Sociodemographic Variables                       | Assoc. Prof. Dr. Khang Tsung Fei                   |
| 9.         | Jiaming Tan                   | S2141940          | The Investigation of Pinhole Defects in Surgical Gloves using Robust Techniques   | Dr. Nur Anisah Binti Mohamed                       |
| 10.        | Yin Zih Hang                  | S2151383          | Exploring Key Macroeconomic Factors of KLSE Stock Market: A Comparative Analysis of LSTM and ARIMA Models                         | Assoc. Prof. Dr. Ng Kok Haur                       |

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|--------------------|----------------------------------|----------|--|---|
| 11.                | Choo Eih Shin                    | S2151386 | Next Purchase Analysis using Machine Learning Methods: A Case Study of the H&M Store Data  | Assoc. Prof. Dr. Khang Tsung Fei                        |
| 12.                | Vivian Leong                     | S2164035 | Bootstrap Control Chart for Generalised Beta of The Second Kind Distribution Percentiles   | Assoc. Prof. Dr. Ng Kok Haur                            |
| 13.                | Anselm Su Ting                   | S2198508 | Understanding Workplace Bullying in Malaysia: A Decision Tree Approach   | Assoc. Prof. Dr. Khang Tsung Fei                        |
| <b>SEMESTER II</b> |                                  |          |  |   |
| 1.                 | Li Jian                          | S2176455 | A Comparative Study of Machine Learning and Time Series to Improve Earthquake Frequency Prediction   | Dr. Nur Anisah Mohamed                                  |
| 2.                 | Wang Zhe                         | S2170701 | Investigation the Relationship between Solar Activities and Climate Variations in Tropical Regions   | Dr. Nur Anisah Mohamed                                  |
| 3.                 | Cheong Kah Ken                   | 17137646 | Comparative Analysis of Time Series Clustering: Dynamic Time Warping (DTW) and Euclidean Distance Measure in Price Index of Companies in Standard and Poor (S&P) 500 Index | Dr. Nur Anisah Mohamed & Dr. Norli Anida binti Abdullah |
| 4.                 | Li Jiacheng                      | 22079234 | Robust Sparse Correlation (RSC) Method with Application to the MAQC-II MicroArray Dataset  | Dr. Nur Anisah Mohamed & Dr. Norli Anida binti Abdullah |
| 5.                 | Chang Mun Wai                    | 17166475 | Exploring the Efficacy of Spatio-Temporal Principal Component Analysis   | Dr. Dharini Pathmanathan                                |
| 6.                 | Suci Aida Fitri Binti Mad Dahhar | 17042075 | Speaker Recognition Among Non-monolingual Speakers of English and Malay in Malaysia using Machine Learning   | Assoc. Prof. Dr. Khang Tsung Fei                        |
| 7.                 | Wang Xinyang                     | 22064468 | Volatility Estimation via GARCH Models with Various Mixtures of Distributions  | Assoc. Prof. Dr. Ng Kok Haur & Dr. Koh You Beng         |

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|----|-------------|----------|---|---|
| 8. | Wong Wenjia | 22080071 | Predicting Portfolio Return and Market States with Component Mixture Densities and Hidden Markov Models (HMM) | Assoc. Prof. Dr. Ng Kok Haur & Dr. Koh You Beng |
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