# Curriculum Vitae

Jinqiang Yu
PhD student at Monash University
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I am passinate at the reserach in data science and AI areas. My reserach experience cultivates my research skill as well as further improves my enthusiasm for research. I am currently working on the PhD project at Monash University supervised by Prof. Peter J. Stuckey and Dr. Alexey Ignatiev.

## Education

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| Feb 2021 - May 2024 | **Doctor of Philosophy** |
| | *Data science / AI department, Faculty of IT* |
| | *Monash University, Australia* |
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| | **Thesis titles:** |
| | Efficient Incrementality in Learning Solvers |
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| | **Principle supervisor:** Prof. Peter J. Stuckey |
| | **Associate supervisor:** Dr. Alexey Ignatiev |
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| Mar 2019 - Dec 2020 | **Master of Information Technology** |
| WAM: 81.1 / 100 | *Monash University, Australia* |

**Core units**:

- FIT5202 Data procession for big data
- FIT5211 Algorithm and data structure
- FIT5197 Statistical data modelling
- FIT5149 Applied data analysis
- FIT5216-18 Master thesis

## Research Experience

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| Feb 2020 - Jan 2021 | **Master Minor Thesis** |
| | *Monash University, Australia* |

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| Topic | Computing optimal decision sets and lists with SAT |

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| Description | Arguably, the most explainable machine learning models use decision rules. The project focuses on decision sets and decision lists. The study provides the advanced approach to determine minimum-size decision sets and decision lists that achieve minimum empirical risk and then investigate sparse alternatives where we trade accuracy for size. more concise, and hence more explainable. |

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| Dec 2020 - Present | **Information Technology PhD Program** |
| | *Monash University, Australia* |

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|---|---|
| Topic | Efficient Incrementality in Learning Solvers |

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| Description | Reasoning, constraint solving and optimisation technologies have made remarkable progress over the last two decades. This project is devoted to tackling the challenges arising in the incremental use of a learning solver applied to various practical problems. In particular, the project will develop novel techniques for the incremental use of core-guided MaxSAT and CP solvers in the context of a series of optimisation queries. |

## Publication

[CP-2020] **Computing Optimal Decision Sets with SAT**
In International Conference on Principles and Practice of Constraint Programming (Rank A)
Jinqiang Yu, Alexey Ignatiev, Peter J. Stuckey, Pierre Le Bodic
Best Paper Award in CP/ML Track
Invitied to submit to the Award Winning Paper Track of JAIR

## Scholarship and Awards

2021 - 2024
**Faculty of Information Technology Research Scholarship**

The scholarship covers living expenses in the whole PhD program.

2021 - 2024
**Faculty of Information Technology International Postgraduate Research Scholarship**

The scholarship includes course fees and oversea student health cover (OSHC) in the whole PhD program.

Aug 2020
**Best Paper Award**

Our paper 'Computing Optimal Decision Sets with SAT' has been selected for the Best Paper Award for the CP/ML Track of CP 2020.

## Professional skills

Proficient in Python, Java, R, and SQL.
Familiar with Spark, MongoDB, MATLAB and C++

## Reference

Prof. Peter J. Stuckey

Professor Peter J. Stuckey is a Professor in the Faculty of Information Technology at Monash University, leader in the optimisation research group of Monash University, and project leader in the Data61 CSIRO laboratory. Peter Stuckey is a pioneer in constraint programming, the science of modelling and solving complex combinatorial problems.

Personal page: https://people.eng.unimelb.edu.au/pstuckey/

Dr. Alexey Ignatiev

Dr. Alexey Ignatiev is a Senior Lecturer at the Optimisation research group of the Faculty of Information Technology of Monash University. Currently, his research is mainly focused on the development and improvement of highly efficient SAT- and SMT-based (satisfiability modulo theories) decision and optimization procedures targeting a variety of important practical applications in AI: from software package upgradability and Boolean formula minimization to model-based diagnosis (MBD), software fault localization and eXplainable AI (XAI).

Personal page: https://alexeyignatiev.github.io/