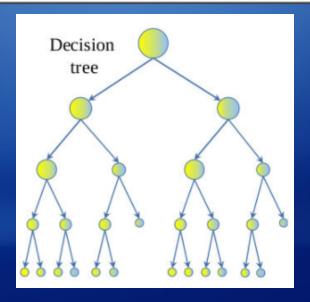


A Machine learning analysis of New South Wales police misconduct

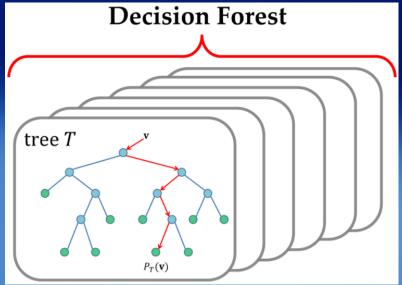
Timothy Cubitt
Senior Research Officer
Professional Standards Command

How does this analysis work?

Decision tree



Decision forest



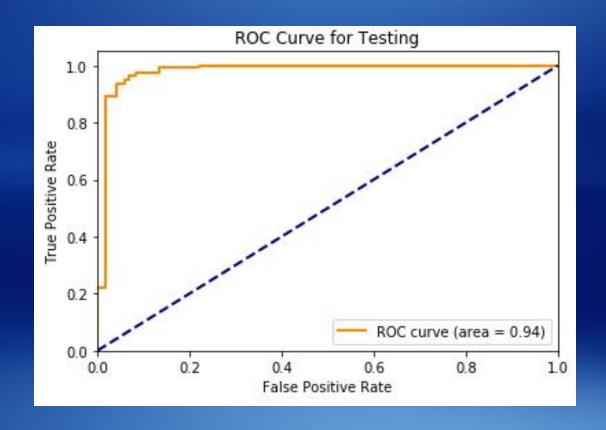


Initial findings

- On analysis it was clear that variables relating to prior consideration for serious misconduct accounted for a substantial proportion of power (0.368) in a particularly robust model (AUC=0.97)
- Due to its strength this result marginally obscured other results, subsequently it was noted and set aside to allow further insight among remaining variables.

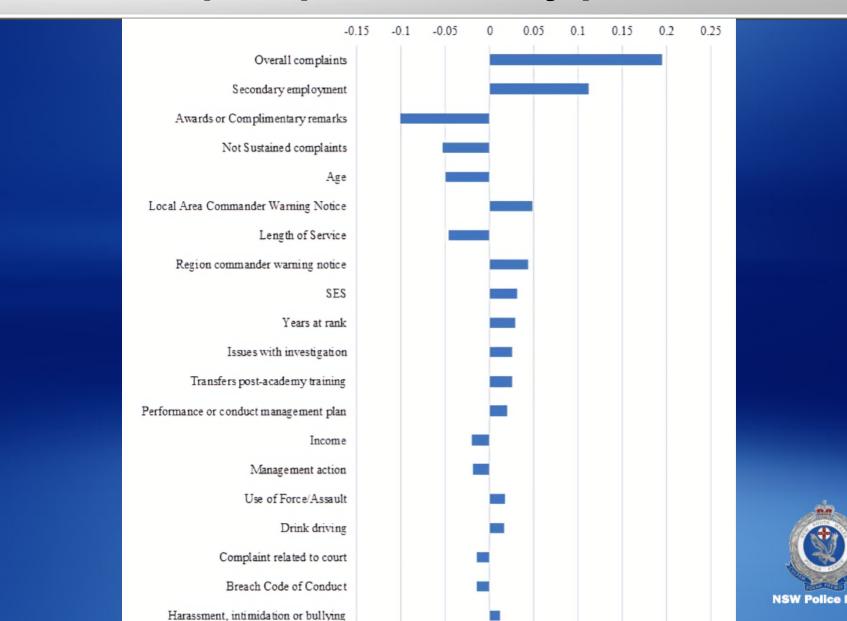


Receiver Operating Characteristic curve



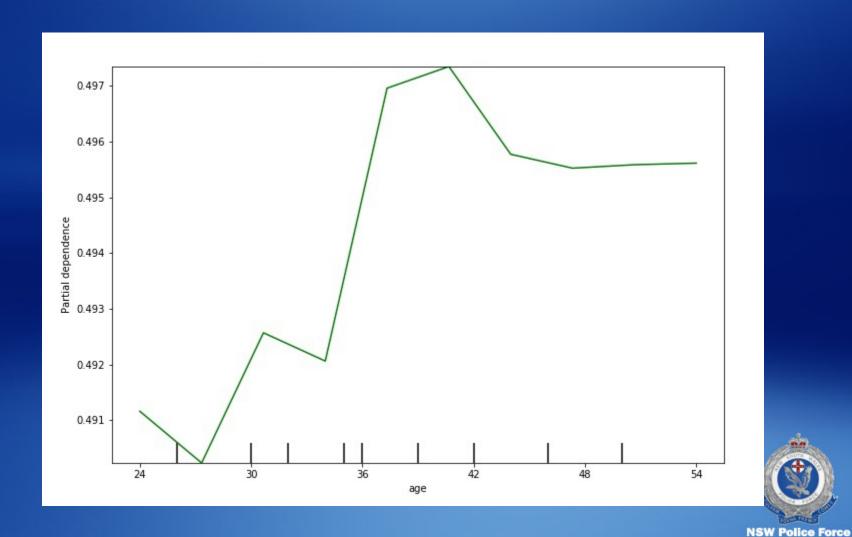


Top 20 predictors by power





Age



Length of service

