DEAKIN UNIVERSITY | DEAKIN APPLIED ARTIFICIAL INTELLIGENCE INITIATIVE

Visualisation of Internet of Things (IoT) Machine Learning (ML) Predictions

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Background and problem statement

IoT ML models can output lots of predictions over time (for many devices). Right now, these outputs are usually checked using spreadsheets or basic plots, which makes it hard to: compare two or more models, see when predictions change a lot, see when the model is uncertain, and explain results clearly to others. The problem is to create a simple website that stores/loads prediction files (which will be provided) and shows interactive graphs to explore and compare outputs.

Aim & Objectives

Build an easy-to-use website that shows model predictions over time, including confidence, and lets the user compare models.

Expected outcomes

- A working website that loads prediction files and shows interactive charts.
- A short document describing the requirements and any limitations.
- A small set of pages/views: prediction timeline, confidence chart, model comparison view.

How will this opportunity benefit you?

Skill development in the following areas:

- Web development basics: building a website using React (or similar), creating pages, managing app state.
- Data visualisation: making interactive charts and dashboards for time-series data
- Working with large data files: loading CSV/JSON, checking for errors, handling missing values
- Basic data analysis: simple counts, confidence thresholding and “how often does it change?” measures
- Software practices: clean code structure, Git, documentation and basic testing

Other details

- Located on-campus at Burwood
- 10 weeks in duration (Unpaid)
- Undertaken as 2 days per week for a total of ~160 hours
- To be completed within the 12-week trimester period