

## Understanding learner behaviour in visual programming environments

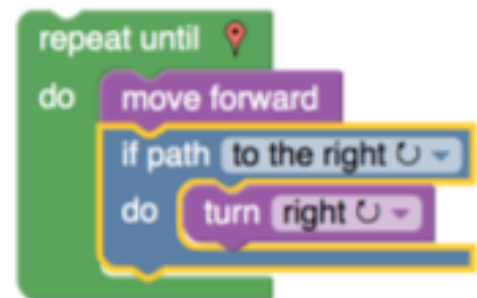
### Project description

Visual programming environments are designed to teach and develop fundamental programming and computational thinking skills in school-age children. Open online programming environments provide a large-scale data source to study how students learn programming and how we can improve the learning and teaching of programming in young people.

Using novel data mining, analytics and visualisation techniques we can perform investigations into large datasets to understand learners and their programming behaviours and performance. You will seek to determine whether there are distinct ways in which learners approach problem solving in visual programming environments, using computational thinking skills, and if there are connections between learner demographics and their performance and behaviours in programming.

We have available a number of PhD projects within this space, working collaboratively with our research team to:

- understand learning processes and behaviours within online learning environments,



- understand the development of computational thinking skills in school-age children,
- develop data analytics techniques and tools for learners and instructors, founded on education theory.

### Student attributes

- You might have an interest in the science of learning and the teaching of introductory programming.
- You might have an interest in data science, including data mining, data analytics and data visualisation.

### More Information

Professor Katrina Falkner

Telephone: +61 8 8313 6178

Email:

[katrina.falkner@adelaide.edu.au](mailto:katrina.falkner@adelaide.edu.au)

<http://blogs.adelaide.edu.au/cser>