James Boocock

Curriculum Vitae

Education

2012–2013 **Diploma for Graduates**, *The University of Otago*.
Genetics and Statistics

2008–2012 **Bachelor of Science**, *The University of Otago*.
Computer Science

Work Experience

Mid-2012–Present **Assosciate Research Fellow**, *Biochemistry Department*, University of Otago.
Investigating Copy-number variation in plant and human DNA sequence.

Current Achievements

- Developed a custom XML-RPC server in python for processing 1000genomes data on the amazon cloud for further processing on local HPC instances.
- Novel permutation approach for assessing significance of polymorphic regions using R.
- Large data-set processing using unix command-line tools.

2012–2013 **Summer Studentship**, *Summer Of eResearch*, Biochemistry Department, University of Otago.

Worked on an interface between galaxy and Globus using python. Other work from the project involved developing a bioinformatics pipeline for analyses of selection signatures. The pipeline is currently in preparation for publication and can be found here

Achievements

- Developed a prototype version of a galaxy globus interface using grython a jython version of Grisu which is a open source java framework designed to sit on top of grid middleware.
- Parralelisation of some selection tools for standard use and scripts to take advantage of the NeSI IBM load leveler instance.
- Python program to run selection tools and processing the intermediate datafiles, in preparation for publication.

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2012–2013 **Summer StudentShip**, *Summer Of eResearch*, Biochemistry Department, University of Otago.

The project focused on maintaining a local galaxy bioinformatics instance. Added a large amount of tools to the local galaxy instance (galaxy is a web interface for bioinformatics software) requiring scripting in bash and python. The github repo for that project can be found here. The project that was started over this summer has remained a common fixture throughout all subsequent employment. Also helped members Merriman Lab with statistical and programming based questions writing scripts and adding tools to the galaxy instance as required.

Achievements

- Wrapped or created tools at the request of lab members and some faculty to the galaxy instance. The main languages used were bash and python with some C and Java.
- Server setup and administration of the galaxy server, requiring extensive unix command-line usage.

2011-2013 **Demonstrating**, *Computer Science Department*, University Of Otago.

Demonstrated three computer science papers from first and second year over three years focusing on algorithms, datastructures and Object-orientated programming. C and Java were the languages used for these papers.

2011-2013 **Private Tutoring**, *Computer Science*, University of Otago.

Tutored two students through many computer science papers in the second and third year of their computer science degree.

Academic

2013 In preparation Selection Pipeline Paper

2013 Oral Presentation at eRsesearch NZ 2013, Christchurch

2013 Oral Presentation at MapNet Meeting 2013, Lincoln

Skills

Basic SQL

Intermediate JAVA,C,C++,R,Linux System Administration, Parralel Programming,IBM Load Leveler,Statistics,GIT

Advanced Python, Unix Command-line

Interests

- Guitar
- Opensource Software
- Weight Lifting
- Reading

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