Andrew Davis

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Profile

Data analyst/scientist with multiple years of research and analysis experience. Possess strong technical skills and knowledgeable in R, Python, bash, SQL, and Tableau. Experienced writing my own scripts and programs for applying analysis methods such as statistical modelling, network analysis, and machine learning methods. Interested in applying data science and bioinformatics concepts to engaging research and analytical efforts.

Education

MSD (Masters by Dissertation) Biological Sciences, University of Essex **Oct 2018- Oct 2019**

- Researched the diversity and functioning of coastal microbial communities
- Applied a multitude of statistical modelling, network analysis, and machine learning methods using Big Data concepts
- Assisted in instructing an R course designed for postgraduate students
- Organised Pint of Science (a scientific communication event) for my local area

BSc Biological Sciences, University of Essex **Sept 2015-June 2018**

- 1st Class Honours Degree

Experience

Data Analyst, Optimum Patient Care **Oct 2010 to Present**

- Compiling, designing, and maintaining reports for regular distribution in R and R markdown
- Providing support on database querying, population, and reporting using SQL
- Advising internal team members and external clients on study databases
- Undertaking quality checks to assure high standards of data and code

EssexLab Research Assistant, University of Essex **Nov 2018 to August 2019**

- Assisted in the design and setup of an eye-tracker experiment
- Worked with python and eye-tracker software to help debug and stress test the experiment
- Used R to visualise and analyse eye-tracker results

Data Analyst, Oerlikon Fairfield, Lafayette, IN **June 2018 to Sept 2018**

- Worked as an inventory analyst at a manufacturing plant
- Used excel to summarise inventory and expected gross earnings
- Increased efficiency of identifying part shortages and relayed pertinent information to management

Final Year Dissertation, University of Essex **Oct 2017 to May 2018**

- Investigated interactions between microbial communities and environmental factors
- Wrote bash scripts to cluster sequences into unique sequence clusters using an open-source pipeline
- Used R to analyse complex data and any possible connections to related environmental variables

UROP Researcher, University of Essex **Dec 2017 to May 2018**

- Worked on a multi-year study titled “Understanding Student’s Lives”
- Using R and Qualtrics survey software, successfully integrated IAT tests into pre-existing surveys and then wrote R scripts for subsequent analysis

- Optimised surveys pre-launch through various stress testing techniques

Research Assistant, Purdue University, West Lafayette, IN **June 2017 to Sept 2017**

- Assisted on an experiment investigating host/pathogen coevolution
- Increased the efficiency of amplifying and tagging genetic samples using PCR and gel electrophoresis
- Wrote python and bash scripts to solve a problem with overlapping gene amplicons
- Practiced standard lab procedures as well as maintenance and sterilisation processes

Research Assistant, Shedd Aquarium **Summer 2016**

- Worked aboard a research vessel analysing the distribution of conch populations in the Bahamas
- Utilised both shallow water survey techniques and a deep-water array to collect data
- Was proactive in ensuring all data was logged electronically prior to the research cruise ending

Intern, Greenforce **Summer of 2014 and 2015**

- Worked as an intern in the Bahamas conducting coral reef monitoring in a marine protected area using AGRRA identification methodologies
- One of the first members of the team to achieve AGGRA certification which allowed me to play a larger role in data collection
- Taught volunteers AGGRA species identifications

Awards and Scholarships

John Shire Prize for Biology (£150) - most outstanding performance in BSc Biological Sciences **2018**

Environmental and Conservation Prize (£150) - most outstanding performance in an Environmental and Conservation-based course **2018**

Abel-Imray Project Prize (£100) - most outstanding final year project in an Environmental and Conservation based course **2018**

University of Essex Dean's List **2015 - 2018**

Vice-Chancellor's International Scholarship (£1,500 **2015**

Skills and Qualifications

Programming

- Proficient in R, Python, bash, and MS office suite. Experience using SQL and Tableau
- Experience developing my own packages and functions for practical use
- Strong data analysis skills and skilled applying statistical modelling, machine learning, and network analysis methodologies

Technical Aptitude

- Possess a high level of computer literacy and am comfortable learning and operating different software
- Experience working in UNIX environments with bioinformatics programs for genome analysis

Problem Solving Skills

- Various research experiences have helped hone my analytical thinking skills
- Actively challenge myself to improve my management and improvisational skills in my free time

Presentations

"The Diversity and Functioning of Coastal Microbial Communities"
Max Planck Institute for Marine Microbiology **Aug 2019**
University of Essex School of Life Sciences Graduate Forum **Sept 2019**

References are available on request