# Andrew Davis

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## Profile

Data Scientist with multiple years of research and analysis experience. Possess strong technical skills and knowledgeable in R, Python, bash, and SQL. 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 concepts to engaging research and analytical efforts.

## Education

**MSD (Masters by Dissertation) Biological Sciences, University of Essex**            **Oct 2018 to Feb 2020**

- 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 to June 2018**

- 1st Class Honours Degree

## Experience

**Data Scientist, Sensyne Health**            **March 2021 to Present**
- Implementing and updating pipelines for data influx
- Understanding medical data first-hand and how it can support developing valid clinical insights
- Extensive data cleaning and preparation for downstream analysis
- Modelling data entities useful for answering research questions
- Designing, carrying out, and interpreting epidemiological studies to address specific clinical questions
- Collaborating with a wide spectrum of professionals in the team: clinicians, data scientists, IT specialists, and machine learning engineers

**Data Scientist, Optimum Patient Care**            **Oct 2019 to March 2021**
- Data lead for a UK focused COVID-19 research project
- Lead all Australian based data projects within the company
- Constantly looked for ways to automate processes and improve code efficiency where possible
- Compiled, designed, and maintained reports for regular distribution in R and R markdown
- Provided support on database querying, population, and reporting using SQL
- Advised internal team members and external clients on study databases

**Research Assistant, University of Essex**            **November 2016 to August 2019**
- Worked in various research assistant roles during my time at the University of Essex
- 1) Assisted in the design and setup of an eye-tracker experiment, 2) worked on a multi-year sociology study, and 3) conducted prototyping work on an automated fish feeder
- Worked with python and eye-tracker software to help debug, stress test, and optimize experiments
- Utilized 3D design software to design models
- Used R to visualise and analyse 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

**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**

# Skills and Qualifications

**Programming**
- Proficient in R, Python, bash, and MS office suite. Experience using SQL
- Experience developing my own packages and functions for practical use
- Strong data cleaning and manipulation skills
- Experienced 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 for general use as well as 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