

TOM CUSACK

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EDUCATION

University of Bath, Bath, United Kingdom • **Computer Science (2:1 / 3.6 GPA)**

PROJECTS

“Inward-Looking Network Analysis” (Python)

- Quality-of-Service application to calculate the local network quality
- Devised a 'Quality Score' algorithm using TCP/IP information (jitter, packet loss) to calculate network quality

“TweetMonitor” (Python)

- Designed an API to calculate Twitter hashtag activity, such as overall Tweets-per-minute
- Used Pandas and Scikit-Learn to analyse Tweets to analyse gender, sentiment and social virility

“Sarky” (Python)

- Sentiment analysis tool analyzing Tweets for their +/- polarity, plotting opinion in real-time (e.g. #NFL)
- Wrote research paper on how to use Machine Learning to predict sarcasm in a Tweet

TECHNICAL SKILLS

- JavaScript (ES6/React.js) (Advanced)
- Python (1 year professional experience)
- C++/SQL (Advanced)
- Git (<https://github.com/tomcusack1>)

WORK EXPERIENCE

JP Morgan Chase & Co. Glasgow, United Kingdom

Associate (June '17 – Present)

- Due to strict policy at JP Morgan Chase. I am unfortunately unable to discuss my achievements at the firm

Actual Experience Bath, United Kingdom

Software Engineer Intern (May '16 – March '17)

- Designed cross-platform (web + mobile) reusable component library for analytics dashboard; used React.js
- Designed the application to maximize scalability and extensibility; use of Redux design pattern
- Built a cache-busting system to minimise API fetch requests through use of Interval Search Trees
- Improved a TCP/IP algorithm to better send out requests for analytics platform

Genius Digital Bristol, United Kingdom

Data Scientist Intern (July '15 – May '16)

- Queried OLAP cubes of TV consumer data to understand viewing habits; suggested better advertisement placement based on demographic and historic viewing habits
- Reduced SQL query time by 75% by implementing distributed caching, leading to a <1s query response
- Helped a TV operator identify time slot for new season of football, reducing advertisement skipping ~25%

AQA Bath, United Kingdom

Web developer Intern (May '15 – July '15)

- Responsible for introducing AdSense onto website, generating £100,000+/year in revenue
- Automated newsletter development using Grunt; saving 20 hours of work per month
- Redesigned newsletter template to be responsive to mobile devices, improving open rate by >50%

Leafylane.com Bath, United Kingdom

Founder (September '10 – December '12)

- Developed a music marketplace, offering music to be downloaded under the creative commons license; music placed on numerous videos with +10M views
- Grew monthly unique visitors to 100K people per month; +1M track downloads
- Designed the web application, using Meteor.js, to ensure scalability. Built on AWS architecture to ensure the application is loaded <300ms