# Howard Lan

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| Education | **Rice University** | Houston, TX |
| | Master of Computer Science, 3.76/4 | June 2021 |

- Coursework includes machine learning, data visualization, grad oop programming, cloud computing, databases, computer systems, and more. Rice D2K data science consultant. TA for COMP 680: Statistics.

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| | **The University of Texas at Austin** | Austin, TX |
| | Bachelor of Science in Mathematics, 3.60/4 | Dec 2018 |

- Coursework focused in statistics, applied math, scientific computing, and user experience.

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| Experience | **Rice University** | Houston, TX |
| | Research Assistant | Summer 2020–Spring 2021 |

Member of Ray Simar's project on analyzing covid data (hsmap.rice.edu) based on seasonal patterns.

- Created interactive SEIR model using D3.js to model spread of the virus.
- Developed the about page content and worked on web development using React.
- Created interactive world maps using Tableau and the Johns Hopkins covid data.

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| | **Cirrus Logic** | Austin, TX |
| | Data Science Intern | Summer 2018 |

Semiconductor company that designs audio products for companies like Apple and Samsung.

- Developed a web dashboard (using R, Shiny) to analyze silicon wafer data and help engineers visually monitor false holds/false releases rates based on wafer bin test limits.
- Consulted with product engineers, database administrators, and statisticians to design UI.
- Applied unsupervised learning algorithms (mixture model, k-means clustering) to classify wafers.
- Improved speed of mcmc algorithm greatly by using Rcpp/C++.
- Wrote complex SQL queries to retrieve silicon wafer data from Oracle database.
- Analyzed silicon wafer data using Python and Excel.

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| | **SAS Institute** | Cary, NC |
| | Software Developer Intern | Summer 2016 and 2017 |

Analytics software company that provides a suite of software to help analyze, manage, and report data.

- Fixed over 30 high priority UI defects and worked on features in SAS Visual Analytics working with JavaScript/TypeScript, HTML, CSS, jQuery, and OpenUI5.
- Built models using linear/logistic regression, decision trees, random forests, neural networks, etc.
- Presented poster of summer work at intern expo to other interns and company leaders.
- Participated in A/B testing to help improve product usability.
- Collaborated with software developers, testers, managers, ux designers, and technical writers.

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| | **The University of Texas at Austin** | Austin, TX |
| | Research Assistant | Spring 2017 |

Member of a research group that focused on analyzing mixed language documents.

- Applied NLP (hidden markov model, LASER, etc) to multilingual documents.
- Refactored Python code and created visualizations (word clouds) with Python and R.

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| Skills | **Languages**: Python, R, Java, JavaScript, HTML, CSS, C++, SQL. |
| | **Big Data Tools**: Hadoop, Spark, Hive. |
| | **Data Visualization**: Python (matplotlib, plotly, seaborn), R (ggplot, plotly), Tableau. |
| | **Database Management Systems**: MySQL, Oracle, MongoDB. |
| | **Machine Learning and Data Analysis**: Python (pandas, scikit-learn, tensorflow, pytorch). |