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| **Student Name:** Robert James Gabriel | **Supervisor:** Dr. Donna O'Shea |
| **Project Title:** Developing a web browser and Chrome extension with on the fly filtering and parent-child monitoring using machine learning algorithms, Node.js and Nw.js | |
| **Research Question:** Investigating/Developing the use of machine learning algorithms to improve on the false positive results in existing filtering/monitoring systems. | |
| **Project Abstract:**  The object of the project is to investigate and develop a method of solving a common problem in existing filtering systems. Trying to understand better what websites to block and what not to block. An example of this is a difference between an adult site vs. a sexual education site, which currently the majority of filtering systems block both.  The project has two parts, the first being a web browser built using several tools but most noticeable Node.js, Firebase, and the Naive Bayesian classifier algorithm. Within the browser, there is a series of functions that scrapes web pages the user visits.  It checks each word and classifies either as profanity or not, along with how often individual words repeat. The dataset gathered from the web page is saved to Firebase, it's regularly updated to have a better understanding. The datasets are used with the Bayesian classifier algorithm to classify if the web page should be blocked based on the words we scrapped and classified. All this is done within seconds, and settings from the browser are synced to firebase.  The second part is a Google Chrome Extension. The chrome extensions are made using mostly Angular.js, Node.js, and Firebase. The extension allows parents to see what your child is doing on the web. It also allows them to set white and black lists for custom filtering. They can see the information were using to classify the websites and disable the web browser there child is on at any time.  Learn more at http://www.projectbird.com/robin | |
| **Technologies used:** Node.js, Angular.js, Npm, Less, Nw.js, Firebase, Chrome API, Html, Javascript and gulp.js | |
| **Class:** Computer Science Web Stream 4th Year | **Table needed for exhibition?** Yes |

