

Product Backlog

| Requirement | Story | Task | Priority | Estimate (days) | Completed and days it took |
|------------------------------|---|--|----------|-----------------|----------------------------|
| Data Collection | As the system, I must collect data from NSERC about the names of the Canadian researchers who have been awarded a DG in computer science in the last 15 years | Gather the Excel table of all previous winners from the last 15 years on the NSERC website | High | 0.5 | Completed 0.5 days |
| | | Implement a way to read the Excel table and collect the names of the winners of the DG award | High | 2 | Completed 1 Day |
| | As the system, I must display the names of the previous winners on the website | Add a "Winners" section on the website that displays the names of the DG award winners | High | 1 | Completed 0.5 Days |
| Citation & Publication Count | As the system, I need to collect the citations and publication counts from the DG award winners in the year they have won the award | Implement a way to search for a researcher's profile on Google Scholar | High | 2 | Completed 2 days |
| | | Implement a way to extract the publication and citation counts from the researcher's profile | High | 3 | Completed 5 days |
| | As the system I want to display the publication and citation count for each winner | Add to the "Winners" section the winners publication and citation counts next to their name | High | 1 | Completed 1 day |

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| Citation Bar Graph | As the system, I want to generate a bar graph of the number of citations for each name obtained | Implement a section on the site that uses data visualization libraries to generate a bar graph of the number of citations of each researcher in the year that they won | High | 2 | Completed 2 days |
| | As the system, I want to display the citation bar graph | Implement a way to showcase the bar graph in that section | High | 1 | Completed 0.5 days |
| Publication Bar Graph | As the system, I want to generate a bar graph for the number of publications for each name obtained | Implement a section on the site that uses data visualization libraries to generate a bar graph of the number of publications of each researcher in the year that they won | High | 2 | Completed 2 days |
| | As the system, I want to display the publication bar graph | Implement a way to showcase the bar graph in that section | High | 1 | Completed 0.5 days |
| Correlation Analysis | As the system, I want to check for the correlation between the publication count vs citation count | Implement, in a new section, a way to analyse the correlation between publications and citations using statistical methods | High | 2 | Completed 2 days |
| | | Generate a scatterplot of publications vs citations using each researcher's counts | High | 2 | Completed 1 day |
| | As the system, I want to see if more publications are favoured than citations | Analyse the results and the corresponding r value and output the correct conclusion based on the value | High | 1 | Completed 1 day |

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| | As the user, I want to see the results of the correlation analysis | Display the results using data visualization libraries in this section | High | 2 | Completed 1 day |
| Grant Correlation | As the system, I want to display the statistical methods used to calculate the correlation between grants, citations, and publications. | Implement a section on the site that shows the formulas and statistical models used to calculate the correlations. | High | 4 | Incomplete |
| Web Display | As a user, I want to click on a name to view more detailed information about that researcher. | Implement a researcher detail page that shows a profile with name, citation/publication history, DG funding info, and a graph. | High | 3 | Incomplete |
| | As a user, I want to view a list of researchers with their citation, publication, and grant stats. | Implement a sortable table displaying researcher name, citations, publications, and DG amount. | High | 3 | Completed 2 days |
| | As a user, I want to filter or search researchers by name, year, or stat thresholds. | Implement a search bar and filter panel using dropdowns and sliders to filter the researcher list by name, DG year, citation count, and publication count. | High | 3 | Completed 1 day |
| | As a user, I should be able to see a ratio or correlation summary for each researcher's data. | Add a "summary" column to the table or detail view that includes citation/publication ratio and correlation tag (e.g., High/Low/None). | High | 2 | Incomplete |
| | As a user, I want to sort researchers by publication count, | Add sorting functionality to the researcher table so | Medium | 3 | Completed 1 day |

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| | citation count, or grant amount. | users can order by any stat. | | | |
| Year Filter | As a user, I want to select a specific year or range of years to view Discovery Grant recipients. | Add a year picker component that only shows researchers who received grants in selected years. | Low | 2 | Completed 1 day |
| PDF Export | As a user, I want to export the current page as a PDF so I can save or share it. | Implement a "Download as PDF" button using a library like jsPDF or browser print-to-PDF. | Low | 2 | Completed 0.5 days |
| | As a user, I want to export the data in CSV or JSON so I can do my own analysis. | Add export options for CSV and JSON formats with a backend endpoint to serve the data. | Low | 1 | Completed 0.5 days |