

THE UNIVERSITY OF SYDNEY

FACULTY OF ENGINEERING

UG Capstone Projects

COMP3888\_COMP3988\_SOFT3888\_INFO3600\_COMP5615\_ISYS3888\_CSEC3888

SOFT\_3888\_TU08\_03\_P13

**Individual Contribution Report**

Student Name:

Student SID: 500468777

Tutor: Caleb The Tjoean

Project: Visualisation tool for scene graph

Client: Yichao Hao

Unit: COMP3888

September 2023

# Statement of Work Done

## Summary of Work Done (1-2 paragraphs)

In the project thus far, I have had a variety of roles. In the first week I was the customer liaison and responsible for initiating contact with our client, Yichao and in doing so organised weekly meetings on Thursdays from 12-1. Following this, in week 2 I was allocated as manager. As manager I added a range of tasks to Notion that needed to be done and allocated them to members of the team as well as updating the wiki with an initial plan and a home page. Then in week 3 as tracker I ensured the tasks allocated that week were being completed as well as outlining tasks that needed to be completed soon to continue the development of our initial prototype. Finally, in week 4, I was the doomsayer and with a greater knowledge of the code as well as the most work in the codebase I was able to outline the areas of the project that I thought would be particularly challenging.

In week 5, I had no specific role other than programmer and worked on frontend graph generation as well as aligning the backend with the frontend requirements. Other contributions as a programmer in other weeks included implementation of a basic UI. I also assisted with system architecture, proposing a react / typescript frontend and a python backend. I implemented flask and restful designs in the API and began some initial data manipulation while a database was being set. I had some input in database architecture but was not responsible for implementing it. I also continually reviewed pull requests in bitbucket.

## 1.2 Weekly Plan

What you intended to do in that week vs what you completed

|  |  |  |
| --- | --- | --- |
| **Week** | **Work Planned (from week 2)** | **Work Completed** |
| Week 1 | * Initiate contact with client * Investigate structure of VG data * Create project description presentation * Do group and individual contracts | * Initiate contact with client * Begin to investigate structure of VG data * Create Gantt chart * Group and individual contracts * Write brief project description |
| Week 2 | * Create backend python environment | * Finish VG data investigation * Generate graphs in backend using matplotlib and network * Retrieve subject object predicate triplets by image id * Create preliminary models to parse first images |
| Week 3 | * High level design * Host backend * Create database | * Create flask app * Create VG endpoint * Implement frontend fetch functionality * Begin d3 graph generation * Decide on database design |
| Week 4 | * Deliver prototype design * Host frontend * Host database | * Refactor preliminary models to implement restful design * Switch to yarn * Switch to vite * Finish d3 graph generation * Investigate alternatives to d3 |
| Week 5 | * Backend development * Frontend development * Graph visualisation | * Switch d3 to react flow * Implement d3 force in react flow * Generate graph dynamically in frontend from api data * Update frontend design for multiple graphs * Update backend VG endpoint to return multiple graphs * Render conceptnet graph in frontend |

# Extent of Work Done (2-2.5 pages)

(Note: Expand on work done each week with all relevant links to **evidence** including to bitbucket wiki, meeting minutes, screenshots of communication between team members, issue tracking, project repository, commit history. For all screenshots please attach them in the appendix and hyperlink them in this section. Evidence could be in the form of hyperlinks/URLs, in-text referencing, or directly insertion of pictures)

* Week 1:
  + xxx
* Week 2:
  + xxx
* Week 3:
  + xxx
* Week 4:
  + xxx
* Week 5:
  + xxx

# Quality of Technical Work Done and Other XP principles (1-1.5 pages)

(Note: Quality of technical work done includes measures taken to ensure code quality (e.g., pairs, rigorous testing, code review, refactoring. Other XP principles include user-story driven development, sprint planning, retrospectives, feedback driven development, agile practices and incremental changes. Please include links and/or screenshots as evidence to validate and support all claims.)

# Discipline-based Contributions (no less than 2 pages)

(Note: A justification of the correlation between your discipline knowledge and your specialized contributions (e.g., adherence to group contract, activities, and contributions in group roles, group assignments, teamwork and collaboration) with links to the evidence)

Appendix (No page limit)

(Note: Please keep the evidence in the appendix is in the same order as the corresponding content in the main body. Do not forget to link the evidence in appendix to the corresponding section in the main body, such as (see Appendix F.1).)