



HEXAD01

SOFTWARE DEVELOPMENT TEAM

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Team Introduction

HEXAD01 is a team of computer science students who share a passion for technology and good software design. Our team members come from diverse backgrounds and have a multitude of experiences in everything from robotics to skydiving.

Team Goals

As a team, HEXAD01 aims to:

- Build working/professional relationships with teammates that will extend beyond the scope of this course
- Achieve a finishing score of 4.0 across all four project deliverables
- Make a project of high enough quality that it could be presented in a job interview
- If possible, create a formal PR into the scikit-learn library using one of the deliverables made during this course

Team Strengths

Many of the members of the team have experience with machine learning and statistics which will be beneficial in working with scikit-learn. Many team members also have real-world development experience with co-op, helping to drive team synergy. All members are dedicated students who have the passion to realize their collective vision to create the best contributions that they can do.

Team Biographies

Aidan Zorbas



Aidan Zorbas is a fourth year student studying at the University of Toronto's Scarborough campus. He is a Computer Science specialist in the Software Engineering stream. He has previously worked with Java, C, JavaScript, Python, and various software and tools including PostGreSQL, Neo4j, and Ansible. He has completed multiple work terms at IBM working on both their IBM Streams and Data Replication for cloud projects. During his terms, he wrote and debugged performance tests using Robot and Python, automated VM deployments with Ansible, and wrote automated UI tests using the Jest and Puppeteer JavaScript libraries. Notable project work includes working as the frontend specialist for his team in the Introduction to Software Engineering course, where he developed the frontend for a sports trivia website using ReactJS. He has taken an interest in computer and network security, and hopes to find a position involving it upon graduation.

Dawson Brown



Dawson Brown is a Computer Science Specialist currently in his 3rd year at UTSC. In the past, he has worked as a Software Developer at Sequent, and held several IT positions. During these work terms, he utilized project management and development tools such as Jira, Github and Agile methodologies. Through school and work, he has gained experience in languages such as Java, Python, C, C#, HTML/CSS, and Javascript. School has also given him the opportunity to work with libraries such as Spring and ReactJS. Additionally, he previously worked on a personal project where he developed and deployed a webapp using Node JS, MongoDB, and AWS where users could upload photos which were later turned into physical photo albums. His interests include video game design, computer security, and algorithm design, and he hopes to pursue a career in either backend development or computer science research.

Jenny Yu



Jenny Yu is a 4th year Computer Science Specialist at UTSC. As a student enrolled in the Co-Op Program, she has worked at a multitude of locations, including but not limited to RBC, Microsoft, and UTSC the Bridge. And at each work term, she has leveraged skills in software development, the scrum cycle, good programming practices and design. She has acquired a wide set of programming languages such as Python, Typescript, Java, and C#. As well as knowledge and experience in a number of frameworks/libraries for full-stack development and deployment. Some of the most prominent frameworks she has used include Django, Angular, Spring, and React, the first 2, was used in building the Find Dining Scarborough website during her work term at UTSC the Bridge. Her interests include full-stack, accessible technology, and good UI design, and has garnered recent interest in machine learning.

Jingrun Long



Jingrun Long is a 4th year Computer Science co-op student studying at UTSC. He is pursuing a Computer Science Software Engineering Specialist and Statistics Minor Program, and has completed a work term at the York Region District School Board as a Programmer Analyst where he worked with large databases. He has gained experience with a variety of languages and frameworks from his time at university like C, Java, Python, Haskell, and MATLAB, as well as development tools and methodologies like Git and Agile.. Notable work includes creating a prototype for the Pickeasy website with React and Firebase and writing a statistical analysis on factors affecting school performance in R. Jingrun is interested in computational linguistics, artificial intelligence, and computer graphics.

Kara Autumn Jiang



Kara Autumn Jiang is in the last semester of her 5th and final year at the University of Toronto, working to finish off both the Specialist Program in Computer Science (Co-Op), as well as the Major Program in Media Studies. During her studies, Kara has successfully completed Co-Op work terms at the Toronto District School Board and Loblaw Digital as a Full-Stack Developer and Product Manager respectively. Kara's other professional experience includes over three years of working within UTSC's Department of Computer and Mathematical Sciences as a Teaching Assistant, two years of working as a Wedding

Planner/Photographer, as well as three years of doing freelance web and graphic design. Some of her technical interests include UI/UX design, natural language processing, artificial intelligence, and the integration of social media technology within education.

Vanessa Pierre



Vanessa Pierre is a fourth-year Computer Science student at the University of Toronto Scarborough Campus. She is enrolled in the Software Engineering Specialist stream where she has gained experience in both front-end and back-end development. During her time at university, Vanessa has gained experience in many different programming languages such as C, C++, Java, Python, JavaScript, Haskell, and Racket. Throughout her years at UoT, she has completed several memorial projects one of which is the CSCC85 final project. During this project, she designed, built, and programmed a LEGO EV3 robot to play soccer against an opposing robot and score penalty kicks into an opposing robot's net. Vanessa and her robot were able to place first during the class robot soccer competition. Vanessa is interested in further pursuing topics related to both compilers and operating systems, as well as a budding interest in graphics.

Team Agreement

Methods of Communication

- Discord for regular communications, and call/text in emergencies

Communication Response Times

- Respond within two hours between 9:00 AM and 9:00 PM on weekdays
- Respond within a day on weekends
- Respond within two hours of the start of the next workday for messages received between 9:00 PM and 9:00 AM on weekdays

Running Meetings and Attendance

- The scrum master is responsible for announcing, starting, and hosting meetings
- For any meetings or work which are conducted during tutorials, meet at the Thursday 3:00 to 5:00 tutorial in SW319 (Mandatory)
- Online standup meetings will happen every Monday, Wednesday, and Friday at 6:00PM over discord in the Standups Voice Channel (Mandatory)
 - Monday meetings will additionally be for planning sprints
- During standup meetings everyone will inform the team of what they've completed, their current status and whether they've encountered any challenges that need to be addressed
- During standup meetings everyone should keep their presentation under 10 minutes
- Extra meetings can be held as needed, however they are not mandatory

Version Control

- GitHub team repo with Gitflow feature branch strategy
- Commit message format: "Name, Ticket #: meaningful description of what was done"
- Ticket numbers should match Jira board
- PRs must be peer-reviewed by at least one other teammate prior to merges on the Development branch (to be assigned based on availability by the author)
- Team members can create additional test and feature branches, but any code merged onto the Development branch should be of 'shippable' quality
- Branch names should match format of Jira ticket numbers: "Ticket _#: _Description"

Submissions

- The scrum master (Kara) will make the final submission, and everyone is responsible for reviewing the aspect(s) of the submission that they contributed to
- Final submission should be made 24 hours in advance of the deadline to ensure that there is sufficient time for last minute changes or emergencies. (All changes and tests are ready for final commit, no new changes should be coming in)

- All submissions must comply with the PEP8 style guide and other style guidelines according to the scikit-learn developers' guide
 - <https://www.python.org/dev/peps/pep-0008/>
 - <https://scikit-learn.org/stable/developers/contributing.html#contributing-code>
 - <https://scikit-learn.org/stable/developers/develop.html#coding-guidelines>

Division of work

- Work will be divided based on teammates claiming/assigning their own tickets on Jira during standup meetings
- Each teammate should expect the same quantity of work as their peers
 - This may mean fewer larger tickets, or a larger number of smaller/simpler ones
- Tickets will be divided up into spikes (research/investigation), implementation, and bug reporting
- Each ticket should have a story or description attached to it, and new features should be complemented with user stories

Contingency planning

- If a teammate becomes sick, or is otherwise unable to temporarily contribute, they must notify the group through the Discord chat as soon as possible, after which their work will be temporarily reassigned to other team members based on availability
- If a team member drops the course, they must let the team know at least a week in advance so that the team can anticipate the change and adjust individual workloads
- In any circumstance, a team meeting will be held so that the team can readjust our workload and/or work distribution

Development Methodology

- The team will be using the Scrum development methodology, and working off of a series of 1-week long sprints
- On the team GitHub repo, our team will be using the gitflow branching strategy (Please see Version Control Section)
- Sprints will start with task planning and ticket creation each Monday

Tools

- Jira will be used to keep track of issues and progress throughout each sprint
- Google Drive and Draw.io will be used for the team to collaborate on writing docs in real time.
- Team members can use whichever development environment works best for them providing it does not cause compatibility issues between workspaces of team members
- Use style checkers to ensure that code follows PEP8 and scikit-learn style guidelines
 - <https://www.python.org/dev/peps/pep-0008/>
 - <https://scikit-learn.org/stable/developers/develop.html#coding-guidelines>

The team members accept these guidelines and intend to fulfill them:

Dawson Brown

Aidan Jeremy Zorbas

Jingrun Long

Vanessa Pierre

KARA AUTUMN JIANG

Jenny Yu