

Past Projects

Combat Evolved, Design Computing Studio:

- Java developer, UI creator (Illustrator) and user tester for a game developed with collaboration of 50+ students. Utilized Git, GitLab and Jenkins for version control, documentation and testing
- Main duties included development of different page's layouts, usage of perception and recognition to direct interaction flow and advancement of story plot. Also wrote wiki pages for design decisions, used issue boards for inter-team collaborations and managed resources for UI guidelines.

HELP at Hand, Social & Mobile Computing:

- Created multi-user interface to satisfy the provided brief. Worked within a team of 4 to find innovative solutions to identified issues.
- Conducted contextualized research in domain to formulate critical understanding of problem space, developed low, medium & high fidelity prototypes using Adobe XD, HTML, CSS & JavaScript to evaluate & improve vision of solution and conducted multifarious user testing to improve design space based on user's mental models.

MyHealth, Design Computing Studio – Build:

- Developed a mobile application within a small team, working both remotely and in person. Utilised diverse UX design practices to find creative solutions to the provided brief.
- Handled both Front-End development (utilizing Ionic, Angular, HTML, CSS & Vanilla JavaScript) and database development/maintenance (Firebase). Other responsibilities included user testing, prototype mockups (Adobe XD), test evaluations and project presentations.

JebSAMA, Digital Prototyping:

- Created a game encompassing novel interaction method, augmenting the given challenges into game concepts/mechanics. Unity & C# used to for creating the game interface and Arduino Uno & IDE used for developing the alternative interactions.
- Developed numerous medium & high fidelity prototypes to test out game features, user interactions, user satisfaction and overall working. Updates and project development recorded through weekly blogs and official documentation.

Rock-Paper-Scissor Tournament, Computer Systems Principles and Programming:

- Wrote two programs to handle server side and client creation for an arbitrary number of rock-paper-scissors game. Programs written in C, using Unix shell as the command-line interface.
- Both programs used network sockets for inter-process communication, and the pthreads library for multi-threading.

SassMobile, Physical Computing and Interaction Design Studio:

- Developed a behaviour change robot using Arduino Uno/IDE, HTML & JavaScript. The concept explored the playful & open-ended interactions in everyday life.
- Working remotely, the team held online meetings, explored alternate user testing methods for remote environments, iteratively design & developed prototypes and presented concept evolution in weekly held meetings.

LaserTank AI, Artificial Intelligence:

- Wrote AI agents in python scripts to solve/find optimised solutions to the LaserTank environment maps.
- Solutions used various AI algorithms/concepts like reinforcement learning (Q-learning, SARSA), continuous motion planning (C-space, Probabilistic Roadmap), reasoning & planning under uncertainty (value iteration, policy iteration, Monte Carlo tree search), heuristic search (Uniform Cost Search, A* Search), etc.

Just The Facts, Infographics & Portfolio, Graphic Design:

- Created 2D visual works to communicate the supplied facts from different sources. Employed technical & theoretical skills in a creative manner to develop a visual language and explore the possibilities for communicating a message in a visual form.
- Adobe Illustrator & InDesign used to create the graphics and portfolio.