

**2nd and 3rd year UG students can be involved in the following projects from AIDE school. The project can be a part of student's design credit requirements. Students are requested to contact the concerned faculties (as shown in the table) to check the project availability.**

S.No	Name of Faculty	Primary area	Project title	Project Brief	Any specific skill set required	Tentative duration	Expected outcome
1	Gaurav Kumar	Computational Finance	Understanding corporate financial distress using ML techniques	Difficulties in business liquidity and the consequent financial distress are usually an extremely costly and disruptive event. The study will attempt to provide a set of features (in Indian context) that can help predicting the sustainability of a company.	Programming skills	6-12 months	Term paper/ Conference paper
2	Gaurav Kumar	Computational Finance	Detecting anomalies in financial statements using ML algorithms	Evaluating the possibility of rating the credit worthiness of a firm's using financial reports	Programming skills	6-12 months	Term paper/ Conference paper
3	Manish Aggarwal	Computational Intelligence	Evolutionary Multi-Objective Optimization of Protease Inhibitors for SARS-CoV-2 and Mutations	Discovery of potential drug molecules to inhibit different mutations of SARS-CoV-2 using evolutionary multi-objective approach.	Python / C / Matlab	10 - 12 months	Working algorithm / Conference paper
4	Manish Aggarwal	Computational Intelligence	AI-Assisted Human Decision Making through Analogy-Based Preference Learning	To explore the potential of analogical reasoning in the realm of machine learning for human decision making	Python / C / Matlab	6-12 months	Working algorithm / Conference paper
5	Manish Aggarwal	Computational Intelligence	Mining Gradual Dependencies for Knowledge Discovery	Developing advanced algorithms in the area of gradual association mining, based on the recent developments in the areas of preference learning, data mining, and the fuzzy set theory	Python / C / Matlab	6-12 months	Working algorithm / Conference paper
6	Manish Aggarwal	Computational Intelligence	Preferences-based Period mining for market basket analysis	To propose a robust market basket analysis approach based on periodic mining and preference learning	Python / C / Matlab	6-12 months	Working algorithm / Conference paper
7	Gaurav Kumar	Computational Finance	Stock market forecasting using deep learning	A local and global event sentiment based efficient forecasting using machine learning	Python / C / Matlab	6-12 months	Term paper/ Conference paper
8	Sumit Kalra	Software Engineering	Mobile-based diagnosis using AI models	Identification and implementation for various digital biomarkers for diagnosis purposes	Android/Full Stack Development	6-12 months	Patent + Publication
9	Gaurav Kumar and Preeti Tiwari	Tech Entrepreneurship	Technological changes for innovation entrepreneurship and knowledge	Technological changes for innovation entrepreneurship and knowledge	Programming skills	6-12 months	Term paper/ Conference paper
10	Gaurav Kumar and Preeti Tiwari	Tech Entrepreneurship	Social media influence on entrepreneurial intentions	Social media influence on entrepreneurial intentions	Programming skills	6-12 months	Term paper/ Conference paper
11	Gaurav Kumar and Preeti Tiwari	Tech Entrepreneurship	Gamification of social entrepreneurship education	Gamification of social entrepreneurship education	Programming skills	6-12 months	Term paper/ Patent
12	Ranju Mohan	Transportation Network	Dynamic Traffic Assignment (DTA) model for heterogeneous traffic	Development of algorithm and GUI interface for DTA in heterogeneous traffic lacking lane discipline using macroscopic traffic flow simulation model	Python	6-12 months	Publication + Patent
13	Ranju Mohan	Driver behaviour analysis	Two-way interactive driving simulator for Indian Traffic	Anaysis of driving scenarios through (Unity +Traffic microsimulator) two-way integration	Python, C#	6-12 months	Publication
14	Dweepobotee Brahma	Computational Health Economics	R package development for Unit level NSSO survey data			3-4 months	R package / Publication