Fintech MSc Projects

COMSM0092

Intro Session

Session plan

- Project Timeline
- Industry Projects; Projects proposed by supervisors; BYOP
- Assessments
- Q&A

Projects Timeline Schedule

TB2:

- Pair up with the supervisor. You will be assigned an academic as your project supervisor Make sure the project scope is feasible.

Industry Project -> Project Proposed by Supervisors / Bring Your Own Project (BYOP)

Summer:

- Begin – After TB2 ends
- Submission – Late August / Early September (TBC)
- Supervision meetings (approx. 20 mins every 2 weeks)

Industry Projects

- A list of industry projects for your application
- Work with a realistic company on a specific project
- Encouraged to apply for it
- Details about the industry projects (e.g., application, selection) will be released shortly

Project Proposed by Supervisors

- We will advertise a list of short project titles and brief project descriptions during the mid of TB2. These projects have been suggested by the pool of project supervisors.
- You will be asked to rank your **top 5 preferences** for the projects that most interest you.
- We will then match you with a project and supervisor. Student-Project-Supervisor matches will be announced (time: TBC).

Bring Your Own Project (BYOP)

- You can also BYOP if you have a project idea of your own. If you want to BYOP we ask you to complete a given short form as it will help you to consider if your project is achievable.

- Before making your final decision, it's good to have a conversation with various potential supervisors, to see what research areas/projects they are interested in supervising and know more details about their proposed projects.

Bring Your Own Project (BYOP)

- Is the research goal well defined?
- What methodological approach will I take?
- How will I measure success? How do I calculate performance?
- Do I require data? Do I have access to this data?
- What technologies will I need to use? Can I install/access these technologies?
- Is the research goal interesting/reasonable?
- Can I compare my result with the literature?
- What is the timeline for my project?

Assessment

- Project Plan (Formative): no mark only feedback
- Thesis/dissertation report (summative): 80%
- Project presentation and Q&A (summative): 20%

Project Plan (Formative)

- A 5 - page project plan, including motivation for your project (i.e., why is the work interesting/useful?), suggested methodology (i.e., why is your technical approach sensible / likely to succeed?), and a timeline of work, including deliverables, decision points, and risk mitigation.
- Your project plan will be formatively assessed by your supervisor and a second independent marker, who will both provide written feedback on your plan.
- Structure on BB

Project plan (research - data)

Question	Example – Predicting company insolvencies
Is the research goal well defined?	I will build an automated system to predict whether a company will go insolvent in the next 12 months.
What methodological approach will I take?	I will use company returns (accounts) to train and test machine learning models to predict insolvency.
How will I measure success? How do I calculate performance?	I will calculate accuracy of binary prediction: solvent/insolvent. I will compare accuracy v. human experts (accountants) via user experiment.
Do I require data? Do I have access to this data?	I require company returns. These are available via Companies House API but are in PDF form. I will need to scrape the required data from PDFs using optical character recognition libraries.
What technologies will I need to use? Can I install/access these technologies?	I will use python for API queries and scikit-learn to train and test my models. I will use Tesseract library for OCR. I have made my first API query and tested Tesseract.
Is the research goal interesting/reasonable?	Other work [REFS] have considered a similar question but using different data/approach.
Can I compare my result with the literature?	I will compare my results with [REFS].
What is the timeline for my project?	Gannt chart of project timeline from start to hand-in

Project plan (development)

Question	Example – Building "Auction Game" Application
Is the research goal well defined?	I will build a new software application for teaching auction mechanisms (English, Dutch, FPSB, SPSB). Users will sign up, will be given a limit price, and participle in auction online.
What methodological approach will I take?	I will take an iterative, agile, user-centred design approach, engaging stakeholders throughout the build.
How will I measure success? How do I calculate performance?	The application must scale to 100 users, it must be hosted in the cloud. User-testing and teacher feedback will be used to ask if teaching/learning was improved in a real/demo class.
Do I require data? Do I have access to this data?	I do not require data.
What technologies will I need to use? Can I install/access these technologies?	I will use NodeJS/Heroku for backend, React/Firebase for front end. I have built a "hello world" using these.
Is the research goal interesting/reasonable?	Software addresses a specific need identified by a teacher
Can I compare my result with the literature?	I will compare my system with [REFS OF RELATED SYSTEMS].
What is the timeline for my project?	Gannt chart of project timeline from start to hand-in

Thesis/dissertation report (summative): 80%

- A maximum 30-page technical thesis detailing your project. A penalty of 5 marks per excess page will be applied.
- The dissertation report is a **must-pass component.** Therefore, to pass the project unit, you must receive a pass mark in the dissertation and also a weighted average pass mark overall.
- More details on BB

Project presentation and Q&A (summative): 20%

- No more than 10-minute pre-recorded presentation:

  The video should explain your project: what you did (methodology), why you did it (motivation), your key results/findings and how they compare with existing work.

- A 30-minute online live Q&A scheduled with your supervisor

- More details on BB

Q&A