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CAPSTONE PROJECT

 **Dr. RUSTAM A. LUKMANOV & MUWAFFAQ IMAM**

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CAPSTONE PROJECT

the high point : crowning achievement

a coping stone : COPING



Dr. RUSTAM A. LUKMANOV & MUWAFFAQ IMAM

THE CITY IN NEED OF STARTUPS



**~ 100 STARTUPS ARE
EXPECTED TO FILL
NEW INDUSTRIAL
PARK SPACES**



EMERGING TECH SCENE

STARTUP AS A THESIS – 4TH YEAR IN YOUR OWN COMPANY



**MORE ABOUT
THIS IN THE
SECOND LECTURE**



EMERGING TECH SCENE

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7 WEEKS

1 – PROJECT / 06.06 – 27.07



DURATION

■

AI – OPEN SOURCE – EXPERTS

LEVERAGE IT ALL TO BUILD YOUR PROJECT



SCOPE and PROJECT SCALE

AI and OPEN SOURCE



Sam Altman ✓
@sama

...

heard something like this 3 times this week:

"our recent grads are now much more productive than people who have worked here for years because they've really learned how to use ChatGPT".

[Перевести твит](#)

1:11 AM · 21 апр. 2023 г. · **1,7 млн** просмотров

960 ретвитов **214** цитат **10,1 тыс.** отметок «Нравится» **802** закладки



 **UNIQUE OPPORTUNITIES AHEAD**

PICK ONE OF
THE TIERS FOR
YOUR PROJECT

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WEB, MOBILE, ML or a PERSONAL track

YOUR PROJECT SHOULD BELONG TO THIS TIERS

- **1 PROJECT PER TEAM (5 OR 7 PEOPLE)**
- **DIFFERENT TEAMS CAN WORK ON SAME PROBLEMS**
- **DIFFERENT ASPECTS OF ONE PROJECT CAN BE BUILT BY DIFFERENT TEAMS**
- **FOR THE PERSONAL TRACK – YOUR PROJECT SHOULD BE PUBLIC, NO NDA, CLEAR PERSONAL CONTRIBUTION, REPORTING**



TIERS

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MVP or a PROTOTYPE

**WILL BE GRADED BY A COMITEE
3 BEST TEAMS WILL RECEIVE A RECOMMENDATION TO A
UNIVERSITY STARTUP BOARD**



GOAL

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MVP – PROTOTYPE EXAMPLES:

1: FUNCTIONING BOOKING SERVICE

2: FINE-TUNED LANGUAGE MODEL

3: WEB STORE

4: LOCAL EVENTS DISCOVERY platform



GOAL

PRODUCT, SERVICE or a PROBLEM –

SCIENTIFIC
BUSINESS
HUMANITARIAN

YOUR PROJECT SHOULD AIM AND CONSIDER:

- **HIGH SOCIAL UTILITY**
- **DEFINED CUSTOMER DOMAIN**
- **TIME, RESOURCE AND SCOPE CONSTRAINTS**

GUIDELINES



WHILE BUILDING YOUR TEAM

THINGS YOU MIGHT THINK IN PRIOR

- **MAKE A TEAM WITH DIVERSE SKILLS**
- **DIVISION OF LABOR**
- **SET THE RULES OF INTERACTION – MAJORITY VOTE/LEAD DECISION / FREERIDE HANDLING**



TEAM BUILDING



PROJECT **TIMELINE:**

WEEKLY DELIVERABLES

- **WEEK ONE - PITCHING IDEAS, BUILDING THE TEAM, DEFINING THE VALUE PROPOSITION**
- **WEEK TWO - CHOOSING THE TECH STACK, DESIGNING THE ARCHITECTURE**
- **WEEK THREE - DEVELOPING THE FIRST PROTOTYPE, CREATING THE PRIORITY LIST**
- **WEEK FOUR - TESTING AND ITERATING, NARROWING THE SCOPE**
- **WEEK FIVE - COLLECTING FEEDBACK, REFINING THE PRODUCT**
- **WEEK SIX - PREPARING FOR FINAL PRESENTATION, PACKAGING**
- **WEEK SEVEN - MVP/PROTOTYPE PRESENTATION, EVALUATING THE RESULTS**



ROADMAP



FEEDBACK, REFLECTION, ACTION

HOW TO REPORT ON YOUR PROJECT

- **WE WILL SETUP THE PROJECT WEBSITE WHERE EACH WEEK YOUR TEAM WILL BE TASKED TO REPORT ON CURRENT PROGRESS, LATEST EVERY FRIDAY EVENING**
- **WE WILL PROVIDE YOU WITH FEEDBACK AND MAKE SUGGESTIONS ON YOUR PROJECT**
- **EVERY REPORT SHOULD NOT BE SHORTER THAN A 2000 CHARACTERS**
- **ALL TEAMS CAN SEE ALL REPORTS / MODIFY THEIR PROJECTS ON THE BASIS OF THIS REPORTS**
- **EVERY REPORT WILL GIVE YOU UP TO 5 POINTS – ALL CAPSTONE REPORTS – UP TO 30**
- **EVERY WEEK WE WILL HAVE A LECTURE/MEETING WORKING THROUGH PAIN POINTS**



LEARNING



GRADING CRITERIA 70 POINTS MAX

**SOME PARTS
WILL BE
ESTIMATED FROM
YOUR
REPORTS!**

- **INNOVATION:** level of creativity and novelty
- **FUNCTIONALITY:** extent to which the software prototype fulfills its intended purpose
- **USER EXPERIENCE (UX):** Considers the overall user experience provided by the prototype
- **TECHNICAL IMPLEMENTATION:** technical proficiency exhibited in the development of the prototype
- **AI INTEGRATION:** level of successful integration and utilization of AI technologies within the software prototype
- **TEAMWORK AND COLLABORATION:** level of collaboration
- **PRESENTATION AND COMMUNICATION:** clarity, persuasiveness, and professionalism of the team's presentation



FINAL EVALUATION

GRADING CRITERIA for THE Personal track 70 POINTS MAX

**DESCRIBE
THESE
PARTS OF YOUR
PROJECT IN
REPORTS!**

- **INNOVATION:** level of creativity and novelty of the project
- **FUNCTIONALITY:** extent to which the software prototype fulfills its intended purpose
- **USER EXPERIENCE (UX):** Considers the overall user experience provided by the prototype
- **TECHNICAL IMPLEMENTATION:** technical proficiency exhibited in the development of the prototype
- **AI INTEGRATION:** level of successful integration and utilization of AI technologies within the software prototype
- **PRESENTATION AND COMMUNICATION:** clarity, persuasiveness, and professionalism of the team's presentation
- **DOCUMENTATION AND CODE ORGANIZATION:** code clarity and quality, completeness of the documentation, including readme files, code comments, and user guides

FINAL EVALUATION



GRADING CRITERIA 70 POINTS MAX

- **INNOVATION:** level of creativity and novelty
- **FUNCTIONALITY:** extent to which the software prototype fulfills its intended purpose
- **USER EXPERIENCE (UX):** Considers the overall user experience provided by the prototype
- **TECHNICAL IMPLEMENTATION:** technical proficiency exhibited in the development of the prototype
- **AI INTEGRATION:** level of successful integration and utilization of AI technologies within the software prototype
- **TEAMWORK AND COLLABORATION:** level of collaboration, execution on a shared vision
- **PRESENTATION AND COMMUNICATION:** clarity, persuasiveness, and professionalism of the team's presentation



FINAL EVALUATION



BUILDING ON CAPSTONE

PROJECT WAS A SUCCESS?

- **CONTINUATION – MAKE SURE THAT YOUR PROJECT WILL BE FEASIBLE AFTER CAPSTONE**
- **MENTORSHIP – FIND MENTORS FROM THE FACULTY OR INDUSTRY**
- **LEADERSHIP – BUILD YOUR TEAM FURTHER – RECRUIT MORE ENGINEERS**



FUTURE PROGRESS



WEEK ONE

WHAT TO DO?

**INSTRUCTIONS WILL BE PUBLISHED ON THE SHARED BLOG
EACH TEAM/PERSON SHOULD OPEN THEIR BRANCH
EVERY WEEK, PUBLISH THEIR PROGRESS IN THE BRANCH
WE WILL EVALUATE YOUR REPORT AND GIVE FEEDBACK**



DELIVERABLES FOR THE WEEK ONE