Somaiya Vidyavihar University Name of College: K. J. Somaiya School of Engineering Application for UG Project Approval

Project No. 24

Programme: Bachelor of Technology Department: Information Technology

Department Thrust Area (If applicable):

Title: SENTINEL. AI - STI: An AI - Driven, SDN - Posered, self Healing 59 Security Framework with & lie Isolation

Category: Departmental/Interdisciplinary: Internal/External

If External attach details with letter from the external organisation for permission to do project / thesis

Whether will receive finance from any agency: Yes / No. If yes attach details.

Objectives of the project in brief (attach separate sheet if required)

To implement an AI driven, 8DN powered, self healing security framework for SG Networks that ensures real time detection of anomalies, automated isotation of compromised network slices, and dynamic restoration of services.

We declare that the proposed work is based on our and / or others' ideas which will be adequately cited and referenced in the reports. We also declare that we will adhere to all principles of intellectual property, academic

Roll No.	Names of the student/s	Programme	Email Id and Mobile no.	Signature of
		/ Branch		the Student
16010422258	Ritisa Behera	B. Tech IT	8104799060	
16010422257	Ajit Pillai	B. Tech IIT	7200125107	AJIO
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16010422274	Chaitravi Reddy	B. Tech IT	chaitravi. 20 Someriya ed	C.

	@Name	Dept. / organisation	Signature
Guide	Sanjay Vidhani	IT	Bill !
Co-guide / External guide			
Co-guide / External guide			

a In case of external guide give mobile no. and email id.

Observations/Suggestions/Comments of Committee (if any)

Date

Signature of Committee Member/s

All the student members of the group must have understanding in all respect towards the execution, completion and evaluation of

Both guide and co-guide must have understanding in all respect towards the execution, completion and evaluation of project and will work as an examiner for all the intermediate examinations including final defense. The co-guide can be other than be internal

For interdisciplinary project there will be one Guide as principle investigator and there can be 1-2 co-guides depending upon the

For interdisciplinary project there will be intermediate evaluation / final defense organised by the parent department of the guide.

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	Time line chart for UC profess	reisity	
L.k. Sooond	Time line chart for UG project w Task (to be filled by the project group)	Cork completion Comment of guide about actual results / progress / level of work completed	Signature of Guide / Co-guide
July Second fortnight	Set up project repositories, management tools, Free 540 + UFRANSIM emulation environments	Work in propose	With date
August First fortnight	create d'test basic stislice emulation, collect initial traffic data, implement data logging mechanisms 4 database		,
August Second fortnight	Build labeled datasets with normal 4 poss scenarios, neign training AIML model for aromaly detection		
Sept. First fortnight	Finalize 4 optimize Al models, integrate At modele with SDN controller and develop initial anomly deterior REST endpoints		
Sept. Second fortnight	Implement slice isolation logicy test end-to-end flow, simulate attact traffic and log-system response times.		
Oct. First fortnight	real time monitoring dashboard, set up backend system monitoring, create visual alerts.		
Oct. Second fortnight	Implement self healing module, define recovery workflows for connect recovery scripts to mygun	The second second	
Nov. First fortnight	conduct internal unit testing; fix integration bugs, run performance tests on slice repro- time, detection latency	xamination / Up to the month	of December

The objectives which will be achieved before intermediate examination / Up to the

January / at the end of the first term

To boild a tonetional prototype elapable of detecting anomalous and DDOS traffic in real time using AI models. The system integrated with an SDN controller to perform outomated slice isolation upon threat deterior. A centralized dashboard visualizing traffic states and alerts.

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Time line chart for UG project work completion

	Task (to be filled by the project group)	Comment of guide about actual results / progress / level of work completed	Signature of Guide / Co-guide With date
Jan. Second fortnight	conduct field testing of the tramework on extended test cases		
Feb. First fortnight	optimize at models 4 pocker orchestration, add authentication 4 access control		
Feb. Second fortnight	conduct a dry run demonstration and write documentation & over monual		
March First fortnigh	ut updating.		
March Feb. Secon fortnig	d documentation, deliverables and checklist		
Apri Firs fortni	sit final internal testing to enture ght complete stability		
Apr Seco fortn	nd	nse / up to month of April / M	Tay / at the er

The objectives which will be achieved before final defense / up to month of April / May / at the end of the second term

folly autonomous, Al-driver, 3DN-powered security

frame work that not only detects and isolates threats

but also performs dynamic self healing of compranised

but also performs dynamic self healing of compranised

slices Solution will support multi-slice environments,

slices Solution will support multi-slice environments,

offere live monitoring, and ensure high resilience

with low Latency response.