

Uncorrelated Track Processing Algorithms

Senior Design 2025-2026

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1 Kyle's Section: Senior Design I Documentation Build-up

1.1 Week 1 Research Break-down

1.1.1 Project Con-ops and Organization

Reference: L16 - Design Proposal and Team Contract Report

- Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec id nisl nec velit dictum suscipit.
- Curabitur porttitor ligula eget ante fringilla, in scelerisque massa ultrices. Pellentesque habitant morbi tristique senectus et netus.
- Components needed related to electronics:
 - Camera requirements [0.4MP, USB3.0, 520fps]:
 - * Integer nec sem eget leo aliquet rhoncus.
 - * Pellentesque vel turpis dictum, tincidunt quam id, ultrices lacus.
 - * Morbi sit amet augue eu nulla sollicitudin sagittis.
 - * Proin feugiat ligula ac eros viverra, sit amet cursus neque varius.
 - * Aliquam erat volutpat.
 - Camera requirements [2.0 MP, USB3.0, 125fps] :
 - * Aenean ac libero sit amet ligula malesuada malesuada.
 - * Sed euismod leo nec mi suscipit, at dignissim nunc volutpat.
 - * Cras interdum purus at justo venenatis, eu imperdiet odio egestas.
 - * Fusce vitae orci a lectus convallis posuere.

1.1.2 Software Integration into Research

Reference: GitHub - github.com/CiboAtlas/UNCORRELATED-TRACK-PROCESSING

- Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vitae lectus non erat euismod bibendum.
- Curabitur finibus ex et neque malesuada, quis congue ligula ultrices. Sed at lacinia urna, id iaculis mauris.
- Components needed related to electronics:
 - Camera requirements [Mini AX200]:
 - * Vestibulum ante ipsum primis in faucibus orci luctus et ultrices.
 - * Phasellus ac nulla quis libero porta sagittis eget at eros.
 - * Nullam gravida eros nec justo cursus, sit amet maximus libero semper.
 - Fiber Optic (Cables and Couplers):
 - * Suspendisse potenti. Vivamus viverra ipsum vel est suscipit, sit amet feugiat lorem mattis.

1.1.3 OpenEvolve Environment Setup

Table 1: * Current Draw					
LLM Name	Release Date	# Major Version	Developer	Training Data Size (TB)	Key Milestones
GPT-4	3/1/2023	4	OpenAI	1000+	Multimodality, Improved Reasoning Vision Capabilities, Context Window Native Multimodality, Enhanced Code Open Source, Scalable Architectures Efficiency, Multilingual Support Open Source, Competitive Performance
Claude 3 Opus	3/1/2024	3	Anthropic	800+	
Gemini Ultra	2/1/2024	1.5	Google	2000+	
LLaMA 3	4/1/2024	3	Meta	1500+	
Mistral Large	2/1/2024	2	Mistral AI	500+	
Falcon 180B	9/1/2023	1	TII	2.63	

2 Aurela's Section: Senior Design I Documentation Build-up

2.1 Week 1 Research Break-down

2.1.1 Topic no.1

Reference: L16 - Design Proposal and Team Contract Report

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 - * Cras interdum purus at justo venenatis, eu imperdiet odio egestas.
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2.1.2 Topic no.2

Reference: GitHub - github.com/CiboAtlas/UNCORRELATED-TRACK-PROCESSING

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2.1.3 Topic no.3

Table 2: * Current Draw					
LLM Name	Release Date	# Major Version	Developer	Training Data Size (TB)	Key Milestones
GPT-4	3/1/2023	4	OpenAI	1000+	Multimodality, Improved Reasoning Vision Capabilities, Context Window Native Multimodality, Enhanced Code Open Source, Scalable Architectures Efficiency, Multilingual Support Open Source, Competitive Performance
Claude 3 Opus	3/1/2024	3	Anthropic	800+	
Gemini Ultra	2/1/2024	1.5	Google	2000+	
LLaMA 3	4/1/2024	3	Meta	1500+	
Mistral Large	2/1/2024	2	Mistral AI	500+	
Falcon 180B	9/1/2023	1	TII	2.63	

3 Ruben's Section: Senior Design I Documentation Build-up

3.1 Week 1 Research Break-down

3.1.1 Topic no.1

Reference: L16 - Design Proposal and Team Contract Report

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3.1.3 Topic no.3

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Current Draw

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Mistral Large	2/1/2024	2	Mistral AI	500+	
Falcon 180B	9/1/2023	1	TII	2.63	

4 Aaron's Section: Senior Design I Documentation Build-up

4.1 Week 1 Research Break-down

4.1.1 Topic no.1

Reference: L16 - Design Proposal and Team Contract Report

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4.1.3 Topic no.3

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Current Draw

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Mistral Large	2/1/2024	2	Mistral AI	500+	
Falcon 180B	9/1/2023	1	TII	2.63	

5 Ezra's Section: Senior Design I Documentation Build-up

5.1 Week 1 Research Break-down

5.1.1 Topic no.1

Reference: L16 - Design Proposal and Team Contract Report

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5.1.3 Topic no.3

Table 5: * Current Draw					
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Gemini Ultra	2/1/2024	1.5	Google	2000+	
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Mistral Large	2/1/2024	2	Mistral AI	500+	
Falcon 180B	9/1/2023	1	TII	2.63	