Pune AI Community Mentorship And Collaboration Scheme (PAIC MACS)

Yogesh Haribhau Kulkarni

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Mentorship Overview

AI Community Projects

- Driven by Pune AI Community (PAIC) Team
- Project-based, hands-on AI mentorship and collaboration
- Focus on real-world systems: RAG, Knowledge Graphs, LLMs, Geometry
- Voluntary, unpaid, non-commercial contribution
- No job or internship guarantees
- Contributions via GitHub pull requests with minimal hand-holding
- Opportunities for talks and research papers

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How to Join

- Email yogeshkulkarni@yahoo.com cc puneaicommunity@gmail.com with subject line "AI Mentoring"
- Include GitHub profile or relevant work
- You will get added to the 'PAIC Mentoring' Google chat-group
- Match skills or willingness to learn required stack
- Learn by building and collaborating

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Projects

Ask Yogasutra

Repo:
https://github.com/yogeshhk/Sarvadnya/tree/master/src/ask_yogasutra

Ask Yogasutra

- AI system to explore Yogasutra of Patanjali
- Combines original sutras, translations, commentaries
- Knowledge Graph: Sutras as nodes, relations as edges
- Streamlit-based graph visualization
- RAG-powered chatbot for Q&A
- Planned GraphRAG for multi-hop reasoning
- **Skills:** Python, LangChain/LlamaIndex, Cypher, Neo4j, Streamlit
- **Focus:** RAG systems, GraphRAG, Graph modeling, Knowledge Graphs, research papers

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MidcurveNN/LLM
Repo: https://github.com/yogeshhk/MidcurveNN

MidcurveNN: Neural Midcurve Generation

- Neural network for midcurve generation of 2D closed polygon shapes
- Geometric dimension reduction using deep learning
- Input: polygon points/lines; Output: midcurve representation
- Architecture: encoder-decoder style models
- Modeling variable-length graph input/output
- LLM fine-tuning for geometry using text-based BREP format
- **Skills:** Python, neural networks, CAD geometry, transformers, fine-tuning
- **Focus:** Algorithms, training data, metrics, benchmarking, research analysis

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Mining Resume
Repo: https://github.com/yogeshhk/MiningResume

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Mining Resume

- Extract structured fields from resumes using text mining
- Parse contact info, skills, education, work experience
- Optional: Build knowledge graph for resume data & querying
- NLP parsing pipelines for unstructured documents
- Entity extraction: name, email, skills, companies
- Dataset cleaning and text normalization
- **Skills:** Python, NLP (spaCy/NLTK), regex, LLMs
- **Focus:** Data extraction workflows, text processing, visualizations

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Sarvadnya RAG Systems
Repo: https://github.com/yogeshhk/Sarvadnya

Sarvadnya: RAG Systems Collection

- Collection of proof-of-concept RAG systems and integrations
- RAG over diverse document modalities & corpora
- Implement RAG for PDFs, text collections, multi-modal content
- Handle chunking, embeddings, semantic search
- Build UI for query & response (chat, dashboards)
- Evaluate retrieval quality and LLM grounding
- **Skills:** Python, LangChain/LlamaIndex, vector stores, embeddings
- **Focus:** Retrieval pipelines, extensions, improved retrieval quality

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The Nature of Code – Python
Repo: https://github.com/yogeshhk/TheNatureOfCode

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The Nature of Code – Python

- Python implementation inspired by The Nature of Code series
- Physics simulations (forces, motion, interactions)
- Generative animations and visual outputs
- Mix of mathematical models and creative coding
- Useful for ML-augmented animation prototypes
- Educational and exploratory codebase
- **Skills:** Python, NumPy, animation frameworks, physics modeling
- **Focus:** Add physics models, improve visuals, link with ML datasets

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Thanks

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Pune AI Community (PAIC)

- ▶ Two-way communication:
  - ▶ Website puneaicommunity dot org
  - ▶ Email puneaicommunity at gmail dot com
  - ▶ Call + 9 1 9 8 9 0 2 5 1 4 0 6
  - ▶ LinkedIn:
    https://linkedin.com/company/pune-ai-community
- ▶ One-way Announcements:
  - ▶ Twitter (X) @puneaicommunity
  - ▶ Instagram @puneaicommunity
  - ▶ WhatsApp Community: Invitation Link
    https://chat.whatsapp.com/LluOrhyEzuQLDr25ixZ
  - ▶ Luma Event Calendar: puneaicommunity
- ▶ Contribution Channels:
  - ▶ GitHub: Pune-AI-Community and
    puneaicommunity
  - ▶ Medium: pune-ai-community
  - ▶ YouTube: @puneaicommunity

Website

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Pune AI Community (PAIC) QR codes

Website

Medium Blogs

Twitter-X

LinkedIn Page

Github Repository

WhatsApp Invite

Luma Events

YouTube Videos

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