
*Introducing*

# PYTHON FOR PETENG EDUCATORS: COMMUNITY OF PRACTICE (PyPE_CoP)

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# Introducing Python for PetEng Educators: Community of Practice (PyPE CoP)

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# Introducing Python for PetEng Educators: Community of Practice (PyPE CoP)

## About

### The People

The Python for PetEng Educators – Community of Practice (**PyPE_CoP**) is made of petroleum engineering educators with demonstrated interests in deploying the Python programming language as a tool for driving digital innovations in their teaching engagements

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## About

### The Vision

… towards **digital innovations** in PE curriculum design and instructional strategies.

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## About

### The Mission

… to foster, **upskilling, collaboration** and **research** towards pedagogical applications of Python programming in petroleum engineering.

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## About

## The Context & Scope

- Our recently-published framework for introducing Python Coding to PE undergraduates. https://doi.org/10.2118/217148-MS
- PyPE_CoP is designed as a platform to equip PE Educators with skills/tools/resources/support needed to implement the published framework.
- A fore-runner of a future Petroleum Data Analytics Community of Practice (PDA_CoP)

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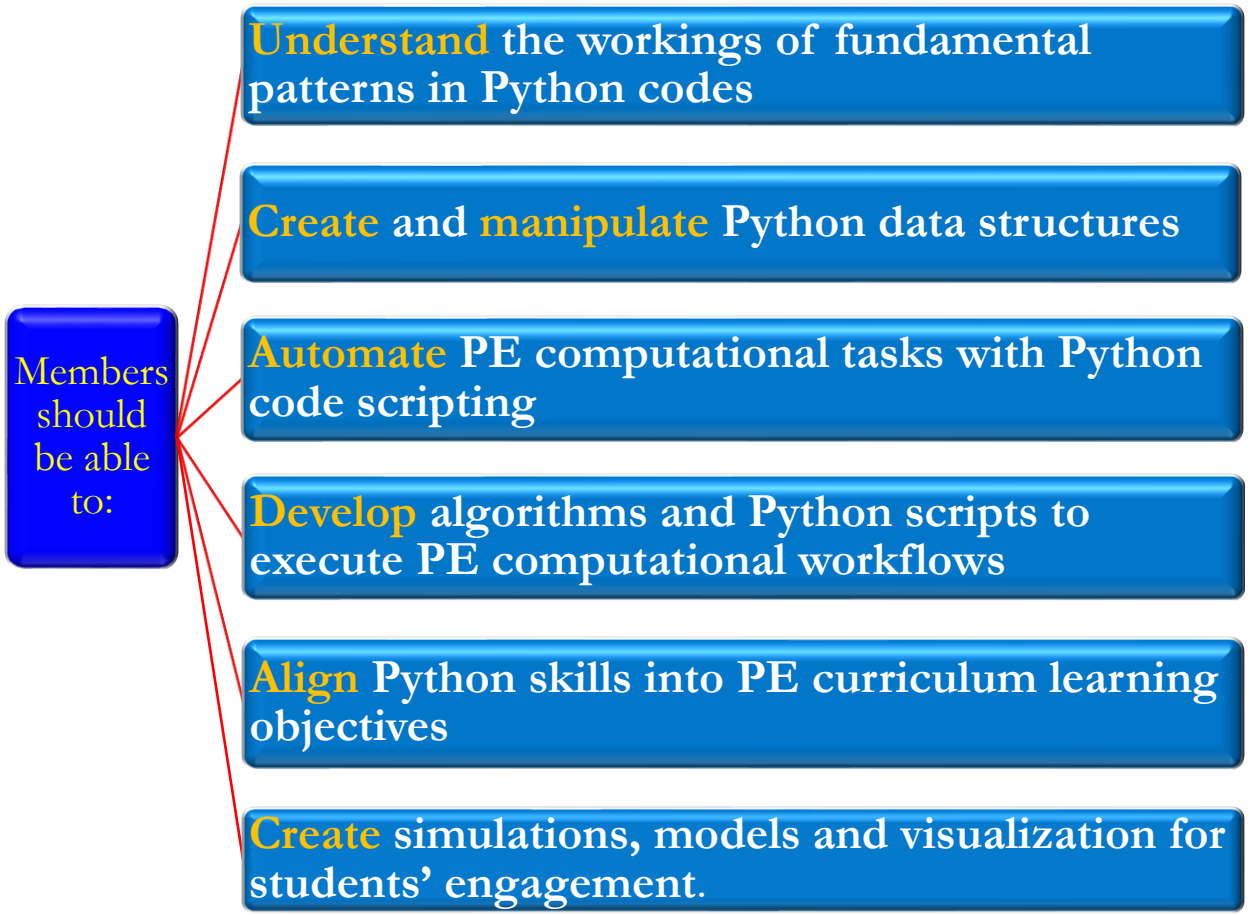
## Structure

## Target Skills



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## Learning Path

## Structure

- Basic Python programming
- Python data structures: lists, tuples, dictionaries
- Python data science libraries

  NumPy | Pandas | Matplotlib | Scikit-learn | Seaborn | Plotly
- Scientific computing with Python
- Petroleum engineering analytics with Python

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## Engagements

## Structure

- Learning sessions
- Hands-on sessions
- Enrolment in online courses
- Invited workshops & seminars
- Peer mentorship
- Research projects
- Learners' experience design
- Collaborative study groups
- Discussion forums
- Resource sharing
- Reading assignments:.
- Group discussions
- Project presentations
- Assessments tasks:
  - Quizzes and Programming assignments

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## Deliverables

- Enhanced classroom delivery
- Digital literacy
- Industry-ready graduates
- Industry partnerships
- Networking
- Resource sharing
- Curriculum integration
- Teaching resources
- Research publications
- Certificate of completion on online courses

## Structure

# Introducing Python for PetEng Educators: Community of Practice (PyPE CoP)

## Structure

## Timelines

To be communicated

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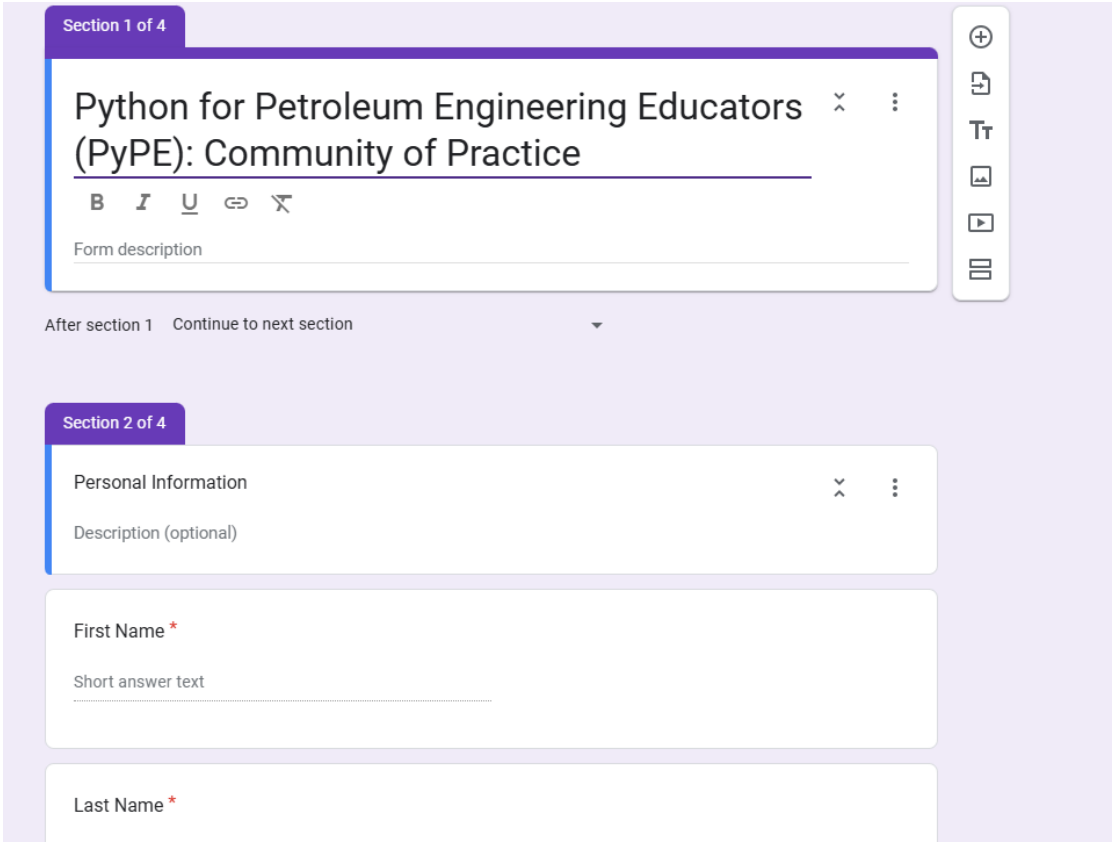
## Membership

### Pre-survey

- Information:
  - Background
  - Prior programming experience
  - Expectations



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## Membership

### Membership Stratification

- Depending on survey responses, there may be a need to have two strata in the membership thus:
  - PyPE – Introduction
  - PyPE – Intermediate
  - PyPE – Analytics

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## Membership

## Membership Expectation

- While membership of PyPE_CoP is free, existing members are to consistently meet some performance expectations, stated thus:
  - Regular attendance of PyPE_CoP activities
    - Training | Project meetings | Seminars | Skill acquisition | Assignments etc
  - Commitment to learning
    - Courses | Books | Publications | Multimedia etc.
  - CAPIC Mindset:
    - Contributory – play your role
    - Active – get hands-on
    - Participatory – be involved
    - Intentional – be purposeful
    - Collaborative – team-up

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## Resources

## Toolbox

- Open-access work environments
  - Python 3
  - Jupyter Notebook (Anaconda) – for interactive learning
    - https://www.geeksforgeeks.org/how-to-install-anaconda-on-windows/
  - Google Colab
  - GitHub – for collaboration with other learners
    - Tutorial here: https://bit.ly/TTOWG_GitHub_Tutorial

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## Resources

### Learning Platforms


Thank
you

```
>>>#TTOWG!
>>>print('…to the only wise God')
```