Session 4: Synthesis, Q&A, and Pathway to Continued Learning

From Techniques to Operational EO AI in the Philippines

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Session Plan

- **Duration:** 2 hours (120 minutes)
- **Plan:**
  - 0–15: 4-day journey recap
  - 15–45: Technique selection matrix
  - 45–75: Best practices for deployment
  - 75–100: CoPhil Campus & community
  - 100–115: Action plans (3-month roadmap)
  - 115–120: Closing & feedback

What You Can Now Do

- Build LSTMs for EO time series (Day 4)
- Train RF, CNNs, U-Net for EO tasks (Days 2–3)
- Use FM/SSL/XAI to scale and explain models (Day 4)
- Design operational pipelines and monitoring (Day 4)

Recap of Days 1–4

Highlights

- Day 1: Python, GEE, data preparation
- Day 2: RF, CNNs (foundations)
- Day 3: U-Net segmentation, object detection
- Day 4: LSTM time series, FM/SSL/XAI

Technique Selection Matrix

- Classification (image/patch) → CNN/Transfer Learning
- Segmentation (pixel-wise) → U-Net / FM fine-tuning
- Detection (bounding boxes) → YOLO/SSD/DETR
- Time series → LSTM/Transformers, temporal validation
- Tabular + EO features → Random Forest/XGBoost

Best Practices

Data-Centric AI

- Fix labels, balance classes, represent regions/seasons

Validation

- Temporal splits, spatial CV, stratified sampling

Monitoring

- Concept/data drift, retraining schedule, dashboards

Deployment

- APIs, performance budgets, documentation, XAI

CoPhil Campus & Community

Stay Connected

- Digital Space Campus (materials, notebooks, recordings)
- SkAI-Pinas: DIMER (models), AIPI (no/low-code)
- PhilSA Space+, NAMRIA Geoportal, PAGASA data
- Monthly meetups, annual EO AI summit, mentorship

3-Month Action Plan

- Week 1: Pick a starter project, run baseline
- Month 1: Proof of concept with validation
- Month 2: Improve data + model, stakeholder review
- Month 3: Pilot deployment + monitoring

Closing & Feedback

- Feedback form and office hours
- Certificates on completion
- Thank you and see you in the community!