Go Explore! Bringing Python to Shell's Geoscience Community

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Challenge

Introduce the latest developments in scientific computing to an old and slow-moving industry to enable innovation.

We Believe

Python will empower geoscientists to use their creativity to engineer new ways to dissect, interrogate, and analyze their datasets.

Python will enable us all to better collaborate on ideas and collectively improve the discipline.

How We Started

Training:

- We teamed up with Agile Scientific to provide tailored training courses at different levels of expertise for our staff.
- Classes covered different skill levels and topics. One class was specifically built for non-coders and managers to help them grasp concepts.
- Currently, we have run this set of training eight times, across the globe, for over 300 staff.

Participants in different Python training classes

New Ways of Working:

- At the end of each training there's a **two-day hackathon** to solve real business challenges.
- Participants bring **their own challenges**. We find participants put more energy into solving a problem from their experience than collectively working towards one project.
- Several of these hacks have become internally deployed tools for the larger geoscience community.
- Hackathons are the most popular event. Common sentiments are,

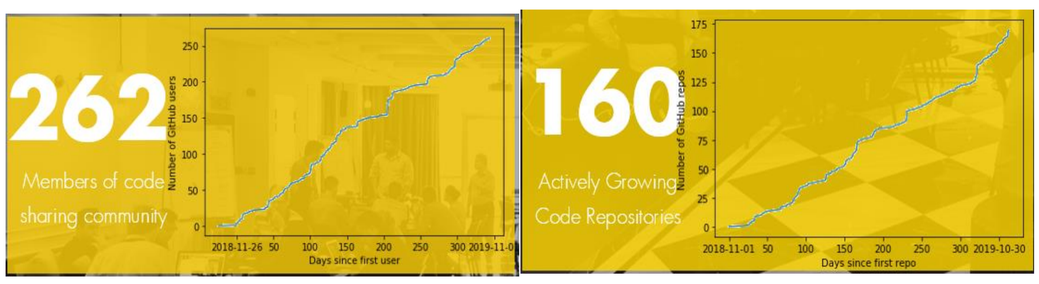
"I am amazed by how much we achieved in two days."

"Why can't we work this way in our everyday business?"

Shell internal hackathons

Collaboration:

- GitHub has been an essential for growing the community.
- GitHub taps into our inherent **desire to collaborate** with others.
- Linear grown in the number of users and repos since GitHub was brought online internally.



Since it was introduced at the end of 2018, the users on the internal GitHub platform has been growing steadily. Data are shown until end of 2019.

Where We've Struggled

- The largest blocker for staff is their **manager's support**. Better messaging to managers is needed to build the case to learn Python.
  - *How have you communicated the role of coding to management?*
- **Code deployment is uneven.** GitHub is helping, but more work is needed to help new coders get from first commit to a MVP solution that works for even non-coders.
  - *How have you helped beginners build deployable code?*
- Most geoscience technical assurers don't know Python and are fixated on conventional workflows. Python solutions and their products need a **technical assurance** pathway.
  - *How does your company assure code from a mix of sources?*
- With **COVID19**, our face to face training program stalled. We are now testing a virtual program in different time zones.
  - What training styles have worked for you in these different times?

Path Forward

- After 18 months into the program, we are firmly convince that coding will be an essential component to our organization's future.
- We welcome advice and ideas from the SciPy Community to help improve the spread of Python and help our staff becoming contributing members of this community.