

PhD Internships

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Overview

- Benefits of doing an internship
- What does it look like to be a research intern?
- How to get an internship?
- Other useful information about internships
- My own experience:
 - Applied Scientist Intern at AWS in Berlin, Germany
 - Research Intern at Samsung AI Center in Cambridge, UK
 - Enrichment Scheme Student at the Alan Turing Institute in London, UK



Benefits of doing an internship

- Experience doing research in a different environment
- Develop new connections
- Opportunities for growth and development of new skills
- Helps you find out what you want to do after PhD
- Learn about culture within the lab or company
- Opportunity to get more publications
- Experience living in a new city
- ...



What does it look like to be an intern?

- More focus on teamwork
- More structured than PhD research (at least in early stages)
- Code reviews
- Many opportunities for meeting new people and self-development
- Many events (e.g., Intern day)

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Unified diff
lib/logger/lib/logger.ex

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 542   Configures the logger.
 543   543   See the "Runtime Configuration" section in the "Logger" module
 544   544   documentation for the available options.
 545   545   • are automatically persisted to the "logger" application
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Meetings and events

- Weekly individual meetings with mentor and buddy
- Team meetings
- Daily stand-up meetings
- Seminars
- Reading groups
- Invited talks
- ...



How to get an internship?



- Apply
 - Ideally between October and January for the following summer
 - Personal referral may help
 - If you do not have one, reach out to authors with relevant papers at conferences/workshops
 - **It is the best if the company has a team that does related work to your research**
 - Where to find: company websites, conferences, LinkedIn, ...
 - Apply even if you only satisfy most requirements (rather than all)
- Do well in interviews
 - Often a mixture of questions about research, ML fundamentals and coding
 - Resources: LeetCode, Deep Learning Book, Understanding Machine Learning: From Theory to Algorithms
 - Show your thinking - getting all answers right is not necessary
 - Make the interviewers want you have as a colleague
 - Often there are many rounds of interviews



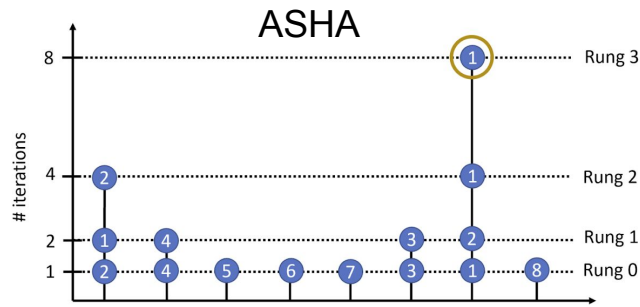
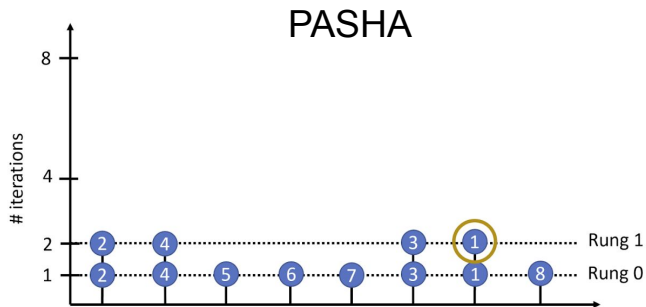
Other useful information

- Usually internships are full-time, but some also offer part-time options
- Usually 3-6 months
- The timing of internships is flexible – can be any time of the year
 - But most internships are during the summer
- It is also possible to get an internship that starts soon so it does not need to necessarily start many months after getting an offer
- If the work gets published, it can form part of the PhD thesis
- Perhaps best to do the internships later in PhD - e.g. the summer of the 2nd/3rd year

Internship at AWS



- Goal: speed up hyperparameter optimization and neural architecture search
 - My PhD area: meta-learning (related)
- Focus on development of completely new methods
 - Potentially in the future it could be part of a product
- PASHA: Efficient HPO and NAS with Progressive Resource Allocation
 - Short version already presented at the workshop track of the first AutoML conference
 - Currently under review at ICLR
 - Part of open-source Syne Tune library, so people can already use it



Internship at Samsung

Samsung Research

- Goal: develop efficient domain adaptation methods
 - Source-free setup where pre-trained models are adapted to the target domain
- Feed-Forward Latent Domain Adaptation
 - New practical problem setting and efficient solution for it
 - Use a meta-learned transformer-based mechanism to efficiently adapt a pre-trained model to mixed-relevance support data
 - Short version already presented at the ICML Pre-training Workshop with full version under review at ICLR
- Feed-Forward Source-Free Domain Adaptation via Class Prototypes
 - Efficient and simple solution for source-free domain adaptation
 - Will be presented at an ECCV workshop later this month
- Patent application submitted

Enrichment Scheme at the Alan Turing Institute



- Not an internship but also an interesting opportunity of related flavour
- Do part of your PhD research while being based at the ATI in London
- Great for networking, meeting people from various areas and learning about different parts of ML
- Especially useful for learning about real-world applications
- Application deadline usually in February
- There is also an internship programme at the ATI but that is different

Questions?