

How to Internship

MultiX Thematic Session | Ivona & Tom | 17 April

Before the internship

Thinking about applying for internships?

Internship applications open usually around December/January - each company has its own career webpage/twitter page where they advertise their internship positions.

However:

- Do not just wait for these positions to be open :)
- Network as early as possible :) Attend conferences, workshops, summer schools, company recruiting events, and similar.
- Reach out to people whose research you follow & like, asking about any relevant internships (use Twitter/LinkedIn/email)
- Reach out to recruiters on LinkedIn, especially after connecting with them on any event
- Ask your supervisor(s) for referrals and recommendations !
- Join the #internship channel in Ivl Slack!

Deciding which companies to target

- Lot of options for our AI profile: Meta, Google, Amazon, Microsoft, Apple, Netflix, Spotify, NVIDIA, AllenAI, Qualcomm, Hugging Face, SamsungAI, etc.
- Extensive list: <https://github.com/pratikratadiya/awesome-ml-internships>
- **Topic/Team match is very important!**
 - Explore beforehand what the teams in your target companies are working on
 - Important to have at least one paper that shows you are a **good match**
- **Research or product - oriented internship**
 - Very important choice if you want to publish a paper
- Location is an important factor :)
- Discuss with ex-interns about their experiences

Make sure to prep

- Your CV
- Your academic website
- Your LinkedIn
- Your Google Scholar
- Sometimes GitHub
- Cover letter (needed for some applications)
- Recommendation letters (needed for some applications)

How many times to apply?

Ivona:

- ~15 applications → interviewing for 3 companies

Tom:

- ~20 applications → 2 interviews

Interviewing

Interviewing

- Can be very different from one company to another
- Recruiters will always tell you what and how to prepare
- Always reach out to ex-interns for further insights in the process

- General points:
 - Make sure to really know all your projects and technical details
 - Prepare to defend everything you listed on the CV
 - Read papers regarding the topic you will be interviewing for
 - Read papers of the person who will be interviewing you

Interviewing: Meta



1 Coding interview

- Revise CS basics: data structures (arrays, stacks, queues, trees, graphs), big-O complexity, brute force, optimizing, etc.
- LeetCode (easy/medium) for coding prep, and also Meta has its own interview prep website
- When the interviewer poses the question, always ask questions to make sure you understand properly what is asked - important to show good communication skills.

E.g. Dot product between 2 sparse vectors.

$a = [2\ 0\ 0\ 4\ 1\ \dots\ 0\ 0\ 0\ 5\ \dots\ 0\ 0\ 0\ 0\ 0]$

$b = [0\ 2\ 3\ 1\ 0\ 0\ \dots\ 0\ 0\ 0\ 6\ \dots\ 0\ 0\ 4\ 0\ 0]$

Note: First always code the brute force solution. They will ask to write test cases and go through the solution line by line. Then they ask about complexity and optimizing the solution.

Interviewing: Meta



Research/team matching interview (can be more than one, depending on how many teams are potential matches)

- Open discussion - type of an interview
- Normally it is with the internship manager
- Discussion about one project most related to the internship topic - useful to have slides about the paper
- They pose a problem related to the internship topic and ask your approach for solving it - usually is technical

Interviewing: Microsoft

- 3 interviews with senior researchers
 - 2 scientific content interviews
 - 1 coding interview
- Tips:
 - Have a solid 10 minute presentation of one of your papers
 - Know the research background of your interviewer
 - Be honest

Internship offers

- Usually higher salary than the current PhD salary
 - Big tech companies (e.g. Meta, Google) provide lot of extra benefits: free food, events, wellness
- Larger companies often do not do negotiations on internship offers
- Be careful with internship offers from Dutch companies
 - They are more accustomed to MSc internship and don't want to pay a full salary
- Don't forget your costs can also be higher if you need to arrange:
 - Relocation (if not provided by the company)
 - Housing (if not provided by the company)
 - UvA pension (later more on that)

Congrats! You got the offer!

What is next?

- Ask your manager/team what you can do to prepare beforehand
- Prepare for visa applications (depending on nationality and location)
 - Normally companies will provide assistance for the whole process
- Fill in UvA internship forms
 - https://docs.google.com/document/d/1rmdHWSBzM_i3nklB9bxouUJZpu2pKX6z/edit
 - Or #internship channel
- Find housing if not provided by the company
- Arrange transport

During the internship

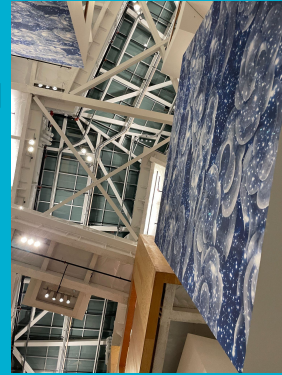
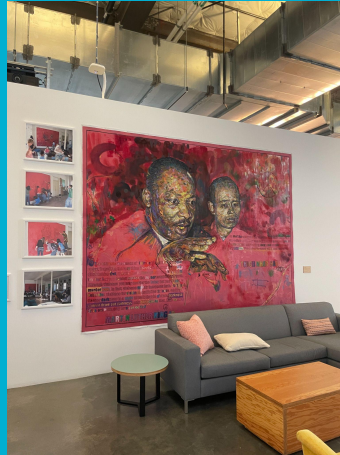
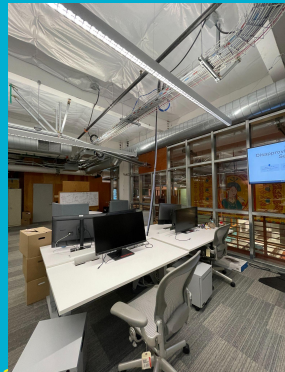
Tips during the internship

- Move fast, prototype fast, execute fast :)
- Enjoy the computational resources
- Network with your colleagues and people from other teams
- Be proactive
- Have fun

Fun foto intermezzo Meta



Fun foto intermezzo



Fun foto intermezzo



Difference between internship and University

- Expect more (technical) meetings
- Faster research timeline
- Collaborating/asking people for help is needed and expected to meet your research goals
- Lot of computational resources
- Lot of hands-on experience

Tips for writing a paper out of the internship

- Know what is expected of you, and communicate your expectations
- Finishing a paper before the internship ends is preferred
 - No access to compute/data/code anymore
 - Help from your supervisors can be limited once you leave

UvA rules

- You are allowed to go on internship for 6 months (possible over multiple internships)
- Fill in this form: <https://docs.google.com/document/d/1rmdHWSBzMi3nklB9bxouUJZpu2pKX6z/edit>
- Your contract at UvA will be put on pause
 - Pension contribution is not stopped: you have to pay employee+employer share
 - This amounts to a cost of 700 Euros per month: don't forget this !

Ivona paid UvA €xxx,xx for the pleasure of doing an internship

Tom paid UvA €4021,50 for the pleasure of doing an internship



Open discussion

- Questions?