Alumni Chat with Brooks: Discussion Questions and Answers

Can you give an overview of your time at UNC?

Majors, minors

CS BS Major, Math Minor, graduated 2019

Standout classes or professors

110 Kris Jordan, 520 Compilers (learn how programming languages work), 530 OS Porter (OS concepts will benefit you no matter what you do, concurrency, bash skills, linux fundamentals, scheduling), 550 Snoeyink (programming interviews == algorithms). 523 SOFT ENG (agile methodologies, project management, SHIFTOVERFLOW)

Honestly try to get your geneds with fun classes. I'll remember intro to rock music, supernatural encounters, The Divine Comedy, thinking about time PHIL, etc.

Extracurricular involvement

Phi sigma pi honors co-ed fraternity, UNC rugby, UNC esports casually, hack NCs

Roles on the 110 team

TA for a year, took apprenticeship under Jeffrey Young for review sessions and led them later on.

What do you do now?

Rust/WASM software engineer at Capital One, working on the open source project wasmCloud. I do software engineering, but a lot of my time is also spent engaging with the community, setting up public GH repos for positive interactions with others, and giving demos about my project.

Why did you choose your current career?

Company, location, role

Capital One, excellent TDP job experience, DC area, pays well, only heard great things from colleagues

How did you learn about this type of career?

Networking with former 110 UTAs, C1 campus events. TDP was a huge bonus for this career

How did you get into this type of role and/or company?

I discovered C1 from another UTA, and at first I was hesitant about working for a bank, but at the risk of sounding cliche it's truly run from a tech management perspective like a tech company with a huge focus on regulation, security, and repeatability. (Complete CI/CD e.g. automated builds, code scanning for vulnerabilities, etc). I loved programming and software engineering with side projects, so I wanted to make that my career.

Was there anything specific you did during undergrad that helped you get into this career?

SIDE PROJECTS! Networking with UTAs and taking referrals whenever I could. Applying for literally everything to get the first job (SentryOne.) Hackathons are also awesome to put your programming skills to the test, gives you practice demo-ing a project, and sharing a technical project with those that haven't seen it before. Communication as an engineer is a GIANT advantage over your peers.

Were there any classes you took at UNC that felt extra related to or were extra good preparation for what you do now? If so, what were they?

If I had to boil it down, 520 compilers, 523 soft eng, and 530 OS were the most useful for me. As Kris put it, with 520 it's one of those few times where you can produce such a solid program with your compiler and it feels incredibly satisfying.

- 520 - Learn about programming languages
- 523 - Get a peek into the industry, work with a client, produce real software
- 530 - Unix skillz, understanding low level programs makes you better at all levels. You get to understand some great concepts with scheduling, memory allocation, familiarization with the shell.

Have you changed careers or had experiences with other roles or companies? If so, what were those experiences like and how did you know it was time for a change?

I started my career with an internship at SentryOne, then internship at C1, then I've been at C1 full time. SentryOne was a smaller company and I felt like I knew everyone by the time I left, which was a great experience. It was hard to turn down the return offer. I have changed roles at C1, it's forced (TDP) but I was more in a software-sales-ey position combined with solutions architect, and I wanted to be a software engineer.

Did you start in TDP / a rotational program and if so what was that like?

Yep! One of the biggest reasons I chose C1, the rotational program. With internship and two rotations I've been on 3 teams in 2 years. Leaving your first team is difficult, but you truly get to choose an experimental first role and get a "free" move within the company, sometimes even with a promotion. You also get additional support, learning opportunities, and events with your TDP "classmates." I got Kubernetes and AWS certified in the first year on C1's dime, which helps my knowledge but also my marketability.

Do you have any things you wish you'd known before starting your role or at your company?

YMMV, compared to an internship or a class you will be expected to ramp up slower as a junior engineer. It was probably a month before I was able to do anything but drink from the learning firehose (my job was containers, kubernetes, AWS, terraform, bash) and I hardly used any of those before. It was probably 3 months before I contributed any actual code, and 6 months before I really became a solid team member.

What's an average day like with what you do?

I get on at 9, I log off at 5, I take an hour long lunch break from 12-1. I can count the amount of times I've worked late (into the evening) on one hand. I'd say 1-2 hours of open source work (github inbox, PR reviews, engaging with slack), 3-4 hours programming, 2-4 hours research, development, planning, team meetings, etc. These time frames include any random breaks for coffee, stretch, doing nothing, etc.

What made you want to return to Capital One for full-time after interning there?

All the people were fantastic to work with, great work-life balance, rotational program, location, proximity to significant other

What was the transition from intern to full-time like?

A lot slower ramp-up, but much nicer for C1 since I knew some ins-and-outs about the company. Less focus on your project and more focus on developing yourself by learning, networking, and "building your brand".

Are there any non-negotiables for you in terms of a job and if so what are they?

Solid work-life balance, no fixing printers, diverse non-elitist culture. Time to learn on the job. Solve problems, no routine processes.

Has mentoring played a role in your experience at Capital One?

I have learned a ton from informal mentors at Capital One, e.g. working with some of the senior engineers in the company. I haven't had a true mentor, but my manager on my first team taught me how to be intentional about my own development and we had a fantastic relationship. A colleague who just graduated from the TDP (e.g. 2 years older than me) was helpful and always willing to explain problems. Anyone like that will improve your job and personal development significantly.

Do you have any advice?

Transitioning to new grad life

Working full time is pretty different from being a student, planning to see friends is something that you may need to put extra effort into with everyone leading increasingly busier lives. Work to live, don't live to work.

You become an adult with bills and boring adult stuff. Keeping a budget is a hard thing to do but once you get the hang of it you will appreciate yourself for it. It's always easier to upgrade your standard of living than it is to downgrade.

Moving to a new city

Making friends can be hard! Hang out with your coworkers, if you like them, otherwise adult clubs are a real thing and are a good way to meet others with a common interest.

Real estate agents will help you find apartments for no cost, and they can also help you scope out neighborhoods in cities that align with your interests (good food, nightlife, quiet suburban with city access, nobody within a mile of your house, etc)

Career mentorship (seeking it out, setting goals...)

Setting goals is hard, but my manager made me scope out goals for my first year about a month in. Work with your people leader to set realistic goals for you to grow and revisit them often as they will probably change

Choosing between different offers/opportunities

Leave salary out of your initial pro/con list

Engineers want to make useful things. Engineers want to solve problems. Between compensation, team, mission, and problem, compensation is necessary to properly draw talent, but it won't keep anyone anywhere. (obv don't undervalue yourself, but try to look at the other factors first)

https://www.youtube.com/watch?v=1KeYzjILqDo

Also salary is less important than total benefits and compensation. What's the 401k matching look like? Does your company provide insurance? Do you get time off?

You're basically going to be learning for the rest of your career, don't be afraid to take a position that largely works with technologies/concepts that you are interested but not experienced in

If you're between a few, talk to anyone that you might be able to get a hold of that actually works there. Friend of a friend knows a girl that takes their dog to a park with a MSFT employee? Get that person's number.

Starting your first internship

All any internship can ask of you is to be willing to learn, and to take on tasks with enthusiasm!

People want to help you, and you should be quick to ask questions if you are confused or if something is ambiguous. If other engineers on your team shut you down, bring it up to your manager. If your manager shuts you down, congratulations you found a shitty company that you won't take a return offer for :) Name and shame em.

Marketing your skills to employers

Show your technology experience with your side projects, instead of just a list of what you know. E.g. Architected backend system with Python Flask API and mySQL database for blahblah

Make a "main" resume with everything that you've done, technologies, projects, etc. Read the job you're applying to and tailor your resume for that job. Don't lie, but get the minimum requirements and nail a few of the preferred qualifications if you can. Always write the cover letter.

Anything that you can do that puts your work out in the open (personal website, github repository with your project pinned to your profile, youtube video) will let a recruiter skim and see you've done real work. If you claim to be a Java wizard, and bam front page of your GH you have this sweet Java project, it's instantly better for you.

Side note: at the resume stage your code will RARELY be looked at, so it will be even rarer for it to be scrutinized. Projects can come up in interviews so remember what you put in your resume for the companies you apply for.