**Normal Questions**

**Most Challenge Project**

I think my most challenge project is the shopping management system.

在我上CC的时候，学了一些分布式系统架构的技术，于是我决定做一个集合这些分布式技术的购物系统，这也是第一次设计并实现一个large scale system。首先就是我设计了一下这个系统的结构，以及在哪些部分会用到分布式的技术，我可以画一下嘛，然后就是比较各个部分所用到的技术，比如比较Memcached和Redis，通过比较这两种cache，我知道了Redis的好处是提供了更多的数据结构，持久化功能，和提供更好的horizontal scale，当在选择message queue的时候，有很多可选的mq，比如rabbitmq，rocketmq，kafka， 通过比较功能，吞吐量，管理的难易程度，和社区的活跃程度，最后我选择用kafka，因为它已经渐渐发展成了标准，虽然在功能上不一定有别的mq多，比如不支持多租户，但是它的吞吐量远远大于其他的mq，而且社区活跃，可以获取的帮助更多。最后就是在implement的时候学习如何配置这些技术到spring boot 当中，

**Tell me a challenge you had where the best way forward was not clear cut. How did you decide what to do?**

**在实习的时候，要求实现一个faq 对保存的faq提供搜索的功能**

**经过一些调查之后，我发现有好几种方法可以实现faq的搜索功能，第一种就是inject controller，自己去吊用lucene API，来实现对数据的搜索，还有一种就是通过利用umbraco自身提供的一个接口，叫Examine，来配置index，searcher来进行查询，在比较这两种方法的时候，我发现，如果用inject controller来实现的话，需要做相对较多的coding，但是如果用Examine的话，就只用更改配置文件就可以，相应的就是他的搜索范围会包含system的部分，所以导致搜索结果会有很多，虽然通过设置一些constraint 就可以获取到准确的结果，但是时间复杂度要高一些，考虑到deadline 以及FAQ的数量并不多，所以我决定先用Examine的方式实现。然后在考虑inject controller的方法**

Situation: Three weeks ago I took part in a hackthon. The topic for the hackthon is human trafficking.

Task, Activity: The first thing I do is to decide the object we focus on, children. Then I discuss with my teammates about the detail we would. Finally I design the architecture for the whole system including how they communicate and I also responsible for the web application.

Result: We finished this system at the end of 24 hours. Also we won the second price in that hackthon. In this hackthon,

**Give me an example of something you tried to accomplish but failed.**

在一起project的时候，因为想要学习到更多的东西，所以在做的时候，老师当时要求的是做一个网站，后端只要用mysql或者是mongodb，因为之前有了解过java当中有JDNI可以配置多数据源，

Situation: When I did a project, use openmpi to solve 2D poison equation in high performance computing.

Task: I was struggling to know how to assign sub-matrixs to several computing node. And how the result get send to other node.

Activity: At first, I don’t know the exact problem. I worked on that problem for a whole night, even I googled lots of related information.

Result: I talk with professor in office hour.

**Give me an example of a time when you showed initiative.**

Situation: I was in CTSI, and when I was fixing a bug of our waitlist component. I find that it’s very inconvenient to use. Because when the event is filled, people who wnat to register will only leave their email and wait the event creator to notify him. This process will require two people’s coordination. which is not efficient. So I talk to my manager, what about rebuild this component which can automatically add people in waitlist to event list. Then nobody need to take actions when position is open.

在改一个bug的时候，我发现这个系统很难用，虽然逻辑简单，但是需要两方的共同工作才能够完成将participant enroll到event当中，所以我跟manager说要开发一个自动enroll的 waitlist，虽然在这个过程中，我需要花一段时间来做coding，同时可能会降低我去做其他ticket的速度，但是这个系统可以 大量的减少以后别人的工作量。 user friendly. 然后我就去设计和实现了整个部分。最终现在大家都已经可以时用到这个功能，创事件的人不再需要一个个 向waitlist中的人再发邮件通知了

**Give me an example of a time when you motivated others.**

Tell me about a time when you delegated a project effectively.

那应该是上学期，当时我上四门课，还有一个part-time, 同时还给professor当vounteer，做blockchain，之前并没有学过，所以有很多东西需要学习，那段时间都是抽空，减少睡眠时间来完成这些事情。尤其是RA这个部分，每周都要跟professor report progress，所以必须每周都能完成一部分，所以那段时间，我觉得我的效率就很高，因为每几天都有due，为了能够很好的提高自己的效率，我还用了habitica, which is a web app 用来管理自己的task，通过在里面设置to-do list，来实现自己高效的工作

**Tell me about a time when you coached someone.**

Situation: when there’s a new student worker get hired, who will take the place of my job when I graduate. And my manager ask me to help him on board.

Task & Activity: I helped him go through the system I was developping, the event registration. And then I send him some tickets to work on. which can let him know more in code. modify the html page, and fix bugs in controllers. (for example, incorrectly calculate the remaining position for an event) form submition to ajax request

Result: after several tickets get done, he getting more and more familiar with the ssystme.

最近我们新招聘了一个实习生，因为他将要接着我的活干，所以老板让我告诉他一些我们正在开发的项目。因为他一开始也不知道我们系统是如何运行的，里面各个模块是如何交互的，所以我一开始就是照着front end给他讲解每个页面是什么关系，至于后端，因为都是代码，所以并不方便解释，而且也不利于他自己理解整个系统，所以我就给他几个关于后端的ticket，让他去完成，虽然在完成的过程中她会有一些问题问我，但是在后期，渐渐的他就能够做到一个人完成ticket

When have you used your fact finding skills to solve a problem?

When conflict with you colleage.

Situation: When I take the CC, there’s a final project. Since it’s also the time for final, We set a timeline for me and my teammates to finish the project. I was responsible for writing the spark program and he is responsible for seting up spark in hadoop. However, when we get close to the deadline of our first phrase. I ask him about the proress. He told me he didn’t finish configuration.

Activity: I keep myself calm and told him that everyone is busy in the final, the time for this project is limit for me. If we don’t follow the timeline, maybe we can’t finish the project on time.

Result: At the end, he apologize to me and then finish his part that night. then we finally accomplish the project on time.

之前上CC的时候，然后当时我和我的队友一起做project，因为workload很大，而且那个学期我有四门课还有part-time，所以我们制定了一个timeline去完成这个project，而且，I am time-concious, 所以当我在问他要第一阶段的成果的时候，他却并没有按时完成。我当时就跟他沟通，跟他说我的困难，希望他能理解，之后

**Principles Questions**

Amazon currently employs more than 100,000 people around the world. Our Leadership Principles are the foundation of our culture and guide each Amazonian. Whether you are an individual contributor or a manager of a large team, you are an Amazon leader.

Customer Obsession Leaders start with the customer and work backwards. They work vigorously to earn and keep customer trust. Although leaders pay attention to competitors, they obsess over customers.

在工作中，waitlist，发现并不好用，因为这个系统地customer就是我们地同事，所以沟通起来也很方便，但是他们并不了解技术，所以为了更方便地跟他们沟通，重新设计功能，并且从他们那里获得到，实现，系统更加好用了

**Case 1:**

**S: I took part in a hackthon weeks before. I design and implement a system integrated with website, application and machine learning in that system.**

**T: Even there’s lots of techs used in that system, I make the user experience extremely simple.**

**S:The system will automatically detect the abnormal situation and send email to parents. And parents can view their children’s activity just by visiting the link in the email. I hide all details behind the frontend**

**R: At the end, the judgers think my application is useful. Also one of the judger from deloite show his interests in our app.**

**Case 2:**

**S: When I work in CTSI, I am responsible for the event regis. I find the waitlist in our system is really hard to use. Not only for the event creator, but also for event participants.**

**T: I design the auto waitlist and implement it. This waitlist will not require creator to send email and participant to register again. it will auto matically add participants to event list when available position present.**

**A:**

**R: At the end, the event creators who use the event system praised on my upgrade.**

Ownership Leaders are owners. They think long term and don’t sacrifice long-term value for short-term results. They act on behalf of the entire company, beyond just their own team. They never say “that’s not my job.”

**Case 1:**

**在完成一些ticket的时候，会发现别的问题，虽然并没有被分到这个ticket，但是会顺便完成掉，比如说waitlist，还有之前在解决浏览器兼容问题的时候，被安排到的是解决图片显示不当的问题，但是，当我在解决那个问题的时候，我发现navigation bar 在缩小浏览器的大小的时候也会出现问题，因为有了解决兼容问题的经验，所以在解决了图片问题之后，也就顺便解决了navigation bar的问题，因为我觉得，系统能做得好需要大家都把系统当作自己的，如果互相推脱只会导致最后系统出现各种问题，而且效率会很低**

**S: when i work in CTSI, I was assigned a ticket to fix the problem of improperly image display in IE. the images are stretched in ie, but looks good in chrome and safari.**

**T: When I was solving that problem, I also find that the navigation bar is also problematic in IE which is not being detected by the manager.**

**A: So I fix those problem at the same time.**

**R:**

**Case 2:**

**S: Waitlist is hard to use**

**T: Learning from our course selecting system**

**A: I redesign the participant table and the controller logic, which allows automatically add participants to eventlist**

**R:**

Invent and Simplify Leaders expect and require innovation and invention from their teams and always find ways to simplify. They are externally aware, look for new ideas from everywhere, and are not limited by “not invented here.” As we do new things, we accept that we may be misunderstood for long periods of time.

之前参加hackthon的时候，在设计的过程中，我提出我们可以借助于智能手表，开发一个手表上的app，实时地发送地址信息，然后系统地后端可以对数据进行处理，发送给machine learning 端分析，从而发现abnormal pattern，这个过程就是innovate by existing technology

**Case 1:**

**S: Waitlist hard to use**

**T:**

**A:**

**R:**

**Case 2:**

**S: Hackthon,**

**T: hide detail, user friendly**

**A: go to the web page and view the activity**

**R:**

Are Right, A Lot Leaders are right a lot. They have strong business judgment and good instincts.

**Case 1:**

**S: When we rebuild the CTSI website, there’s about 1 hundred pages need to be created and there’s only 2 senior and 3 students working on it. And the duration is short.**

**T: Our manager told us that we can seperate those pages in several phrase. Before the deadline we should finish phrase 1, which can allow use showing the demo to the leader. Fixing bugs like Improperly display in IE is phrase 2**

**A: Then I follow the instruction, and meet the requirement by the deadline,**

**R: The leader is grateful for our achievement.**

**Case 2:**

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Hire and Develop the Best Leaders raise the performance bar with every hire and promotion. They recognize exceptional talent, and willingly move them throughout the organization. Leaders develop leaders and take seriously their role in coaching others.

**Case 1:**

**S: a new student worker is hired who will take the place of my current role. I was asked to coach him about the event registration system**

**T/A: I first help him go through our event registration system and our programming environment. Then I send him some easy tickets which let himself to discover the details in the system. Like adding Cuz he need to make modification to the existing system.**

**R: After working on several tickets, he has a deep understand the work flow of the system.**

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Insist on the Highest Standards Leaders have relentlessly high standards—many people may think these standards are unreasonably high. Leaders are continually raising the bar and drive their teams to deliver high quality products, services and processes. Leaders ensure that defects do not get sent down the line and that problems are fixed so they stay fixed.

**Case 1:**

**S: waitlist hard to use, simple, user friendly**

**T:**

**A:R:**

**Case 2:**

**S: In the event registration system, I find the website is very slow. even the functionality went well.**

**T: I test the possible reason to find whether there’s massive computing. And I find that events page requires several table join in database which will take a while, especially for those event has already finished.**

**A: I denormalize the database which allows to get the most recent event directly and also I add a redis cache. so application won’t query the database after the first time.**

**R: This modification makes the system running much faster.**

Think Big Thinking small is a self-fulfilling prophecy. Leaders create and communicate a bold direction that inspires results. They think differently and look around corners for ways to serve customers.

**Case 1: Tell me about your proudest professional achievement**

**S: Hackthon, win 2nd prize, during a whole night, judger’s love my idea and the result**

**T:**

**A:**

**R:**

**Case 2: Tell me about a time when you went way beyond the scope of the project and delivered.**

**S: waitlist, which can make event creators’ life easier, even I took a lot of time to do that, but it worths a lot**

**T:**

**A:**

**R:**

\*\* Bias for Action Speed matters in business. Many decisions and actions are reversible and do not need extensive study. We value calculated risk taking.

**Case 1:**

**S: hackthon, 1 night to design and develop a system**

**T:**

**A:**

**R:**

**Case 2:**

######################################

Frugality We try not to spend money on things that don’t matter to customers. Frugality breeds resourcefulness, self-sufficiency, and invention. There are no extra points for headcount, budget size, or fixed expense.

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**Case 1:**

**Case 2:**

**S: Weeks ago, I took part in a hackthon,**

**T:**

**A:**

**R:**

Vocally Self Critical Leaders do not believe their or their team’s body odor smells of perfume. Leaders come forward with problems or information, even when doing so is awkward or embarrassing. Leaders benchmark themselves and their teams against the best.

**Case 1:**

**在做information retrieval小组project的时候，当时我们准备做一个搜索引擎用来通过歌曲搜索歌名，当时组员们都决定将构造的inverted index 存在一个hashmap当中，但是我当时提出一般情况下搜索引擎所需要存储得搜索内容都是很多的，hashmap很有可能并不能完整地存储在内存当中，所以我觉得我们应该做一些persistent，来防止溢出，虽然做这些东西可能会比原来更加复杂一些，但是系统具有了更高的实用性。这就是当中的trade off把，因为我的提议，后来我们在做demo的时候，professor还特地表扬了我们的实现，并且在最后拿到了比较高的分数**

**I was working on a ticket and When I think I’ve done that and send it directly to the test engineer, seconds later, he come to tell me that there’s some problem, and Then I work on it again, it take like 3 times. Then I get embarrasing and realize my problem and decide to fully test it by myself. then send it to tester.**

**finnaly it passed. This taught me that I am not always correct, I should work**

**Case 2:**

Earn Trust of Others Leaders are sincerely open-minded, genuinely listen, and are willing to examine their strongest convictions with humility.

**Case 1: friend doing things not good**

**tell him that I know and ask him why, listen to him and then tell him it’s bad, and come up with better solution, not make him embarrassing**

Dive Deep Leaders operate at all levels, stay connected to the details, and audit frequently. No task is beneath them.

**Case 1: WAIT LIST**

**CASE 2: CC Project, design and implement a shopping management system, use different distributed system, elasticsearch over hbase**

在做CC project的时候，还有ML project的时候，作为一个team leader，我得安排project的进度，和做project的时候所需要用到的技术，比如我们在写CC的时候，由于project的内容比较多，包含了配置hadoop，配置spark，写mapreduce，搭建docker等，所以我们不得不分配任务，但是当大家在处理各个部分的时候，为了让大家都能学到东西，所以我们每周都会开两次会，来分享大家学到的东西，以急踩过的坑，做过的mistake，这样能让大家更快地学习到各个部分，同时也能够更快地完成工作

Have Backbone; Disagree and Commit Leaders are obligated to respectfully challenge decisions when they disagree, even when doing so is uncomfortable or exhausting. Leaders have conviction and are tenacious. They do not compromise for the sake of social cohesion. Once a decision is determined, they commit wholly.

**CASE 1:**

Deliver Results Leaders focus on the key inputs for their business and deliver them with the right quality and in a timely fashion. Despite setbacks, they rise to the occasion and never settle.

**Case 1**: many assignment

S: last semester, i have 4 course, a part-time job and a RA volunteer. nearly every week I have 2 due. What I do is write to-do list to manage every hour. and set the deadline in the calender to remind me different pivot date.

T: At the end I get a good GPA for the course and did well in RA, I implement a block chain app for the de mo paper. And also earned money, learned skills in my part time job.

**Case 2: difficult situation**

last semester, workload is heavy and no time to travel, to hangout with friends

Course

1. Cloud Computing (difficult, deliever result, dive deep
   1. project work with friend, This is the first time we write map reduce program and run on hadoop, the most diffcult part is debug the program. Because we config the hadoop in cloud, and cannot install an IDE in cloud, Based on the experience of running program locally, we can debug the function simply by print the keypoint or log the keypoint in LOG file in program, and the second one use IDE locally and config hadoop in our own computer, the first way may produce large amount of LOG, and the second way will require use to config locally, waste space and take some time.
   2. we schedule our project with a specific time line, when I was doing the project, I always pay too much attention to the detail which may influence the process. Like when I do configuration of spark, in order to learn more about the spark. I spend a lot of time to read the configuration document. However, this process cause me miss the deadline of our first step. At the end, I know that when the project is in hurry, I shouldn’t spend too much in detail. (deadline, problem, conflict
2. Human Information Processing (user
   1. In the project, I want to design a workout application like myFitnessPal but much more easier. fitnesspal includes lots of functionality. Firstly, I make a servey to see which function do people like most in FitnessPal, around 20 people, that indicate people are interested in the main function, other function just make the app more difficult to use. Then I design an app based on the survey, and In this app, I just preserve the main function, calculate the calory based on the food arrangement and make the UI cleaner by integrate with visual effect and long short term memory. The professor was impressed by the survey I made and also I got a good grade.
3. High Performance Computing (difficult
   1. In the final project, we need to use cuda to implement a program and solve the poisson equation.The first difficult part is poison equation. I haven’t learned pe before and don’t know how to solve it by programming. I learned it by watching videos and googling. The second part is how to distribute the matrix to GPU unit and get the result. I tried to get clear with this part. This asynchronous programming is really hard to understand. I read several cuda sample program and trying to simulate the actions in sample to accomplish the project. Finally, after I got more knowledge in cuda computing, I finally finish this project.
4. Machine Learning ( deliever result
   1. In the final project, close to the due date, but I underestimate the time RNN would take, each time I modify the parameter, it took several hours to finish, the best result i got is just 70% roc curve, so I find whether there’s other way to finish the project on time. The first thing is run the
5. Develop Secure System (incomplished
   1. medical case history stored in cloud and can be access with private key, incomplished project actually, when we design this system, we want to use the security features in blockchain, however, during the actually implementation, there’s lots of security issues need to be check. Like how people get registered on the system. How can doctor get the medical cases when the patient passed out. We can insure the storage and transmisson is secure though.
6. Database (dive deep
   1. high standard, In the final project, we need to design a data warehouse to store history data and recent data at the same time, and also design a website to use such warehouse. In the first step, I follow the requirements to design a market system, which can store all purchase historically and implemnt it. However, I find that when we want to get the customer’s all history purchase, we find it is time comsuming if we simply use table join. One way to solve it is using denormalize the table. Another way to solve the problem is using NoSQL to store the purchase history of a single customer in one entry. So I add NoSQL to the system which significantly reduce the time when we get the history of a user. During this project, I use multi data source to the system which is not required in our project. Not only I learned how to design the data warehouse, also I learned how to analyze the time complexity of query.
7. Information Retrieval ( bias of action
   1. 在做information retrieval小组project的时候，当时我们准备做一个搜索引擎用来通过歌曲搜索歌名，当时组员们都决定将构造的inverted index 存在一个hashmap当中，但是我当时提出一般情况下搜索引擎所需要存储得搜索内容都是很多的，hashmap很有可能并不能完整地存储在内存当中，所以我觉得我们应该做一些persistent，来防止溢出，虽然做这些东西可能会比原来更加复杂一些，但是系统具有了更高的实用性。这就是当中的trade off把，因为我的提议，后来我们在做demo的时候，professor还特地表扬了我们的实现，并且在最后拿到了比较高的分数

Project

1. hackthon 1 ( learn and be curious
   1. took part in hackthon, I’ve heard about the blockchain and bapp long time ago, but always don’t have time to learn it. So I want to learn such technology by taking part in the hackthon and lean it in short time. In that 24 hours, i spend some time to understand how blockchain and block app works and then learned how to write program in solidity. After that I design and implement the a blockchain app with my teammates. The app is design for patient and doctor to store patients information in Blockchain.
2. hackthon 2 ( deliever result
   1. 之前参加hackthon的时候，在设计的过程中，我提出我们可以借助于智能手表，开发一个手表上的app，实时地发送地址信息，然后系统地后端可以对数据进行处理，发送给machine learning 端分析，从而发现abnormal pattern，这个过程就是innovate by existing technology
3. RA
   1. I was doing a volunteer in a LERSAIS lab doing research in BlockChain, And I was doing a project for demo paper. This is my first time doing research and I think the best way to learn how to write a paper is by joining the meeting of other researchers. So I asked professor whether I can join the meeting between him and the phd I work with. When they were meeting, I took notes about the requirement of writing a paper, asking question about the details worth to note and join in the discussion about the paper they are working on.
4. shooping management system
   1. learning, keep
5. linux

Job

1. waitlist (ownership, simplify
   1. the waitlist is not easy to use, I talk to the leader and ask whether we can redesign the waitlist to make it automatically enroll people in waitlist rather than sending email to them
2. image improperly rendered (ownership
   1. improperly render, detect and solve other problem at the same time
3. faq ( bias of action
   1. **在实习的时候，要求实现一个faq 对保存的faq提供搜索的功能**

**经过一些调查之后，我发现有好几种方法可以实现faq的搜索功能，第一种就是inject controller，自己去吊用lucene API，来实现对数据的搜索，还有一种就是通过利用umbraco自身提供的一个接口，叫Examine，来配置index，searcher来进行查询，在比较这两种方法的时候，我发现，如果用inject controller来实现的话，需要做相对较多的coding，但是如果用Examine的话，就只用更改配置文件就可以，相应的就是他的搜索范围会包含system的部分，所以导致搜索结果会有很多，虽然通过设置一些constraint 就可以获取到准确的结果，但是时间复杂度要高一些，考虑到deadline 以及FAQ的数量并不多，所以我决定先用Examine的方式实现。然后在考虑inject controller的方法**

1. login authentication (backbone and commit
   1. when I was in the first intern, I don’t have any experience to design and implement the login authentication. So I told my manager that it may takes a while to finish this part if we want to make the system secure, but my manager said it doesn’t matter. However, as a developer, I know if the login system is not secure, the whole system will be in threat, So i insist that this part is inevitable, hence I spend the time after work to learn this part and implement it at work which will not add extra time to finish this part.
2. help redesign the event registration system (learn
   1. when i know react and how react optimize the front end, I suggest my manager that we can use react as our front-end framework, which not only can .
   2. when we gather the requirement from our event creator, they want to have user defined form, add payment options, analyze tools. Since their requiremnet is much more than what I can done shortly, our manager suggest to buy the service rather than build on our own. After investigate the existing service, I found those service not only powerful, but also very cheap. So the only thing I did is using their API and simply add our own front-end, then we can build a powerful event registration system. Finally, the admins are happy with the functionalities we get from the api.
3. rebuild our CTSI website with CMS ( are right a lot
4. Google Analytic ( think big

Personal showed:

Conflict