<https://github.com/viraptor/reverse-interview>

Could you describe to me your management style and the type of employee that works well with you?

What does this position daily working look like?

What do you expect me to accomplish in the first 1 month/3 months?

What does a typical day/week look like in this role?

What does this position require me to have?

How do you define success for this position? What metrics are you using to measure my accomplishments?  
What are the biggest opportunities facing the company/department right now?  
What have been the biggest challenges this year for the team?  
How long does an engineer typically work on on a project for? Are large project frequent?

Why you: I graduated from Boston University as a computer science major. While I was in school, I not only took much higher level software courses but also I had a few internships as a Web developer and software engineer. Plus, I have a passion for web development, and I desire to learn and to leverage my software skills.

I have always wanted to be a part of a company that provides me with opportunities to learn industry-related skills and technologies. I am confident that my enthusiasm, self-motivation and relevant experience would make me a great fit for your program.

* Intro：

Hi, my name is Yong, Zhou. I majored in computer science. I just graduated from Boston University. Currently, I am seeking to a software engineer job to leverage my coding and analytical skills. While I was in school, I motivated to participate more events and activities. For instance, I involved in Student Government Association as an executive Treasurer and represented students’ voices on campus and member of Honor grogram(honors student Advisory Committee). I also liked to look for new knowledges to explore or research opportunities. For example, I and my two classmates created a game project called Bomberman by the tool of Unreal Engine, which we just heard about the 3D engine in one of the CUNY Hackathon. Unreal Engine is a great tool to make 3D games, compare to 3D unity, it is free for students and professors,

* Tell us about an ongoing or completed project to which you have made significant contributions.

I was an undergraduate research assistant at the National Science Foundation. My project was to develop the analytic model for predicting customer churn from 1.5 years of transaction data by Python. I utilized machine learning model of Logistic Regression and Random Forest to determine driving factors based on historical customer behavior.

I enjoyed the part of solving challenge questions. For example, while I was doing the project of Customer Churn Predication, it was hard to define the specific time when the customer churned. To solve this question. Firstly, I searched similar questions online and tried to find how other people to define this kind of questions. However, I failed. Then, I carefully checked my data set and divided it into small pieces based on the different transactions that customers made. Lastly, I discussed with my team members and solved this question together.

* Tell us about a project you are proud of, and what makes you proud of it. (1-3 paragraphs

Well, that was my senior year in CS, so the project I am most proud of isn’t writing functions or classes. The company I worked as a “software programmer” past summer. They tried to provide me anything I needed for tracking the fire polygons in videos. I tried to work on fire image detection first. Being two months, I trained and detected many objects but fires.

I had never learned machine learning yet. It took me two months to researched and learned all kinds of object detection models, machine learning tools, etc. All that from having zero knowledge about the subject going into the job. I succeeded met their goal, detected and segmented infrared images with fires.

* When was there a time when you handled a situation wrong?
  + I put too many times on the details and
* What could you have done differently?
  + I had many internship during academic years in college insteading of take off in break of summber and winter. I have learned different real world problems and to able to slove them. compare to most students who have not have internship yet.

How do you get rid of a table displaying doubles (SQL)

How did a previous project prepare you for this job?

* I have learned more knowledges from previous project. In research, in design for the android app application.

What if there was a tight deadline and you knew you were behind. How would you handle it?

* Solve it step by step. Put more time on it.

2. If you had several tasks you were responsible for how would you go about them.

Eg. Would find the best solutions to approach.

* + I buckle down and figure out the best approach to completing the tasks. I would start by organizing the tasks from most important to least, and then I would begin working on the most important task. If there were any tasks I could delegate to other capable individuals, I would not be afraid to ask for assistance.”
  + if I saw that I absolutely could not accomplish a particular task on time, I would ask for an extension.”
  + For programming assign, find the running time long one, and run it while doing other questions.
* Look through all of them, and finish

3. There were some basic SQL questions

What is the software development cycle?

Can you list and explain the steps of the System Development Cycle?

* Identify problems
* Plan
* Design
* Build
* Test
* Deploy
* Maintain

*What are the c# access modifiers: public, private*

*, protected and internal. Describe what they are and how they are used.*

Public - Can be globally access by code in this or any other assembly  
Private - Can only be accessed by code in the same class or struct  
Protected - Can be accessed by code in the same class, struct or any derived class or struct  
Internal - Can be accessed by code in the same assembly

Typical OOPs questions

* How do you get rid of a table displaying doubles(SQL)
  + Distinct
* What mechanism can be utilized to speed up data retrieval in SQL.  \
  + Indexing, implement indexes on the database side where the queries are executed
  + Clustering: clustering key is column or group of columns the clustered tables have in common.

Data project MA 415. <https://zacklight.com/ml/themed_report.html>

* Whether tweets have critical business information
* What would change by Elon Musk said and did and how its stock price has changed accordingly.

Hypothesis: Wall street Journal may have a strong influence(such as correlation) on the stock prcice of Tesla.  One might imagine that stock prices are particularly susceptible to breaking news on social media since the news reflect new market information.

We might be able to create trading strategies if our research fins a correlation between them.

* we scrapped data of Elon Musk’s own twitter account and relative reports about Tesla from the twitter account of a news source (CNBC). The source code is in scrape\_twitter\_data.py.
* After performing the analysis on all three datasets, we have found while all having similar characteristics, the CNBC one to have the best correlation with the stock movements. Thus, we would use it for most of our analysis below.

### Comparing to S&P500

* correlation between S&P500 and Tesla is not very strong. While S&P500 is generally growing over time, there is more fluctuation in the stock price of Tesla. So, there must be other reasons driven the change and we believe the news and releases on social media can be an explanation for that. Our assumption about the influence of social media can be a possible explanation for that.
* When we run regression n of the daily number of likes on the change of price. -> no relation
  + emotion scores do not add up to a fixed number like 100% but are discrete numbers based on the average emotion scores of all tweets on a given day. This also increases the difficulty of our research since the independent variables of emotions might be quite correlated with each other.
* We found that stock price is weakly negatively correlated with emotion intensities. We hypothesize that people tend to get more emotional about low stock prices than the high ones.