K Group Algorithm Study 6.0

Joonhee Hwang, Yonghyun Hwang, Jinwon Choi
K Group

Mar 2023

Agenda

- Algorithm Study Motivation
- What to Study
- Study Curriculum
- Study Operation
- Q & A
- Happy Hour for Study Groups

Motivations for Algorithm Study

- Uniqueness of Job Interview for Software Engineer
  - Interview itself looks most important. Background doesn't matter sometimes
  - Interview is not fully related to job (or current) position/function
- Interview Challenges
  - Discrepancy from what I learned from school
  - Pseudo random questions for interview
  - Different interview styles/questions for different companies
  - Many failures without fruitful feedbacks
  - No computer. Just whiteboard. English. Phone interview first

Motivations for Algorithm Study *(cont')*

- However, once you join…
  - Trivial works most of time. No magic skills required
  - Contribution, Contribution, and Contribution to company. Nothing matters much.
    - Skills for interpersonal relationship and/or sometimes politics
- "Importance" to join company you like
  - Growth opportunity!!! Chicken & egg problem!
  - Good networking which leads to good startup opportunity
- Hence, K Group Algorithm Study
  - Need to prepare for interviews. Even seasoned engineers.
  - More/better networking & share & help each other

What to Study

- Three Categories for Study
  - CS (Computer Science) common
    - Algorithm & data structure
    - Coding (with c/c++, java, python, …)
  - CS core
    - Computer architecture, OS, Compiler, Network, Database, ...
  - Domain knowledge
    - Big data, ML, Kernel, Firmware, File system, ...
- Algorithm Study
  - CS Core: usually knowledge/experience based
  - Domain: for senior engineer (usually focused on system design)
  - So, targeting CS common only

Study Curriculum

- Algorithm study (50%)
  a. Solid fundamental before jumping into interview questions
  b. MIT opencourseware
     - Introduction to Algorithms
     - Design and Analysis of Algorithms
- Interview question solving (50%)
  a. Leaked + popular interview questions
  b. Leet code & careercup

Recommendation: Algorithm Study

- Recommended schedule: +8 weeks *(2 studies per each week)*
  - Introduction to Algorithms: 18 lectures. Each 50 mins long
  - Design and Analysis of Algorithms: 6 lectures. Each 80 mins long
- Each Study
  - Before study: watch/study a lecture
  - During study: a member summarizes the lecture. The others ask questions if any
    - Every members take a turn for the lecture summary
  - Note:
    - The purpose for this study is not to go for mid-term/final exam
    - Hence, try to relate concepts onto real engineering problem

Recommendation: Interview Questions

- Recommended schedule: +8 weeks *(2 studies per each week)*
  - Leet code: +80 questions. 5 questions per each study
  - Careercup: +80 questions. 5 questions per each study
- Each Study
  - Before study: solve 10 questions
  - During study:
    - Every study members take a turn to share each solutions.
  - After study: come up with the best solution.

Study Operation

- Study Group
  - Around 20 people per a group. 2 leaders for the group
- Group Leaders
  - Manage study plan && Communicate with k group
- Study Members: Note that we're doing kind of seminar
  - Attend study and watch class video "before" the study
  - Networking && Join discussion actively
- Place && Time
  - Depends on decision by each study group
    - place: 도서관 룸, 카페, 커뮤니티 센터, 회사 회의실, ...

Study Operation *(cont')*

- Bayareakgroup Algo Study Group Board
  - Backup for study materials including interview questions && their solutions
  - Share experience/tips for job interviews, TC negotiation, …
- Kakaotalk Open Chatting
  - https://open.kakao.com/o/gFUg2x5e
- K Group Support
  - Special sessions for interview && career grow
  - Any difficulties, questions, suggestions, ...
  - Email: algorithm_study@bayareakgroup.org
- **Last but not least**
  - **PLEASE SUPPORT KOREAN COMMUNITY TO GROW "TOGETHER"**

Questions?

Happy Hour for Study Group