BEng in Computer Science

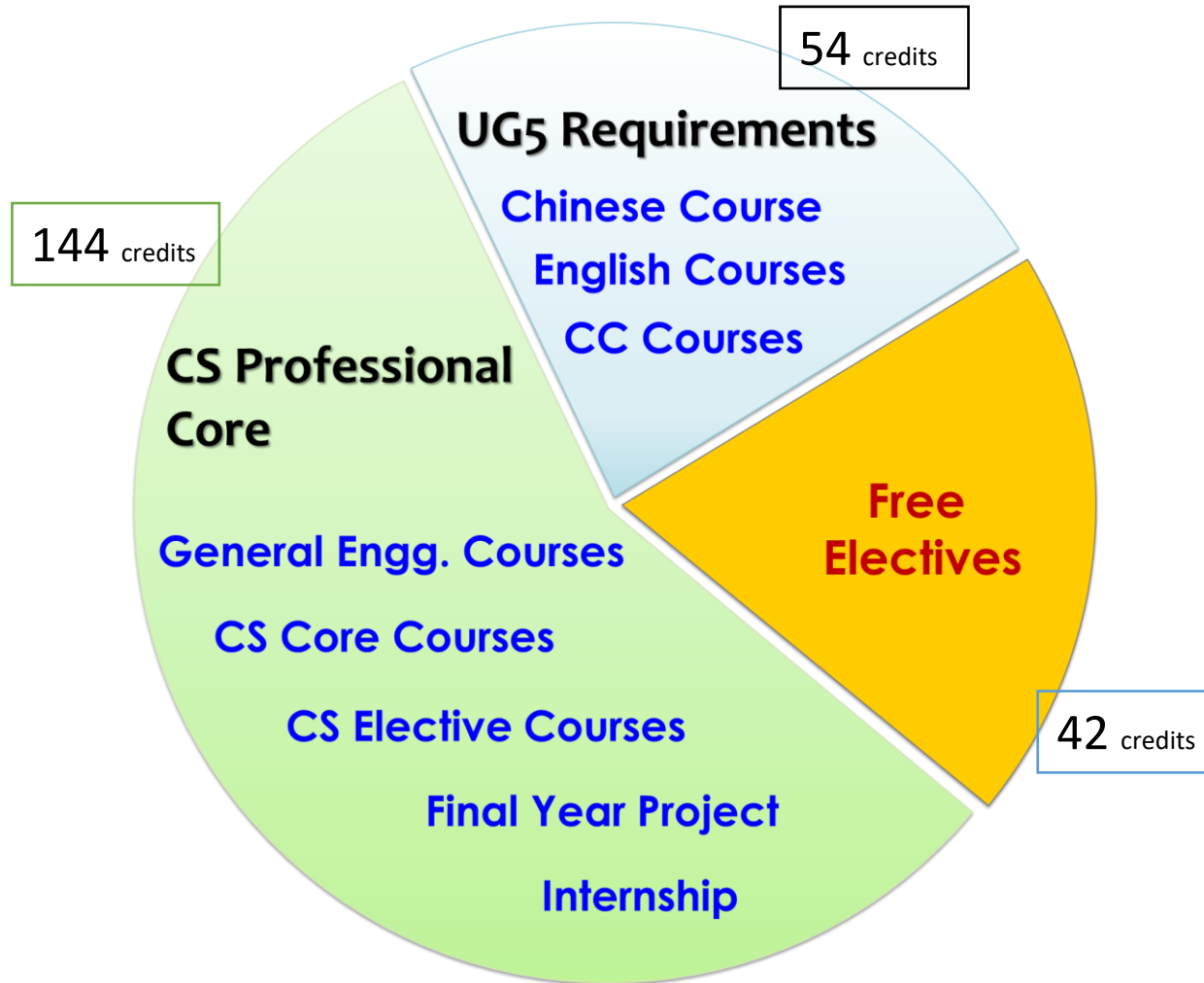Dr. Anthony Tam
Academic Advisor

2021/22 Briefing

What is Computer Science?

Computer science is not just about programming and studying the computers, but rather it is about **problem solving –** *the study of algorithms and information representation to solve real-life problems.*

"Almost every major challenge facing our world is <mark>*turning to computing for a solution*</mark>, from conquering disease to eliminating hunger, from improving education to protecting the environment." by Prof. Eric Roberts of Stanford University, the co-Chair of ACM's Education Board at 2007

Programme Structure

144 credits

54 credits

UG5 Requirements
- Chinese Course
- English Courses
- CC Courses

CS Professional Core
- General Engg. Courses
- CS Core Courses
- CS Elective Courses
- Final Year Project
- Internship

Free Electives

42 credits

Flexibility

BEng(CompSc)

BEng(CompSc) + minor

$FE \geq 36$ credits

BEng(CompSc) + 2 minors

72 credits $\leq FE < 90$ credits

BEng(CompSc)+ 2nd major

72 credits $\leq FE < 90$ credits

(GEBP)
BEng(CompSc)+ BBA

$FE \geq 54$ credits

Minors & 2nd majors

Minor

- Any minor **except**
  - Minor in CS & DSE

2nd Major

- Any major **except**
  - Major in CS
  - Major with a total loading of 96 credits
    - E.g., Science Majors, QFin

Check this out: Academic Advising Office (http://aao.hku.hk/)

Computer Science Focus Areas

Theoretical Computer Science

Compiler, Functional programming, Quantum computing, Game theory, Cryptography, Advanced algorithm

AI & Robotics

AI, Machine learning, Deep learning, Computer vision, Robotics, Hands-on AI

Big Data Analytics

Statistical learning, AI, Machine learning, Adv DB, Data Mining, Bioiformatics
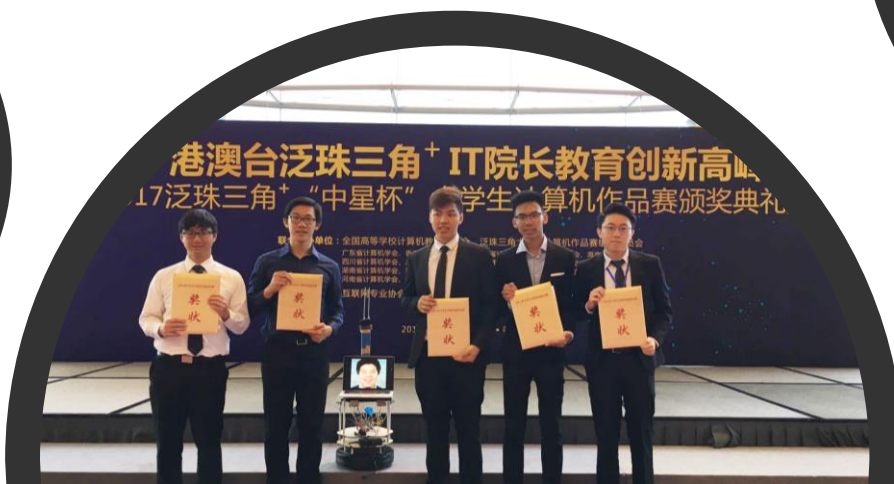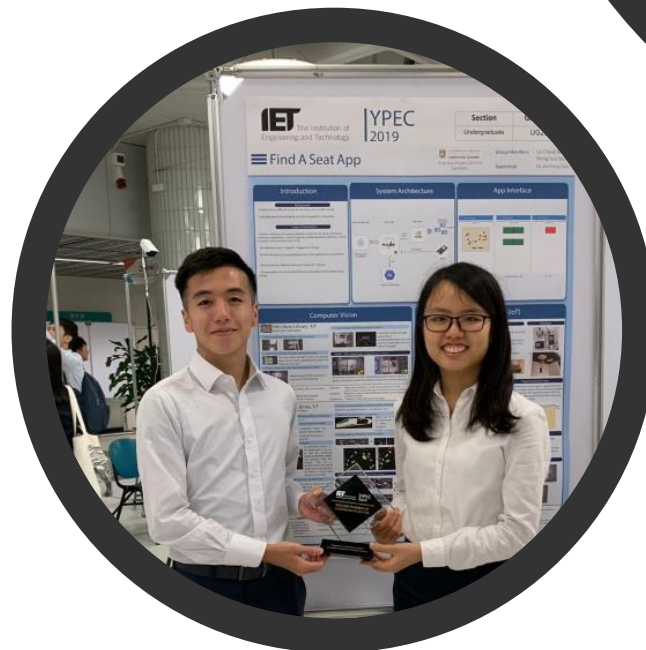
Financial Computing

Cyber security, Blockchain, Crypto-currency, E-payment, Ecommerce, Web technologies, Data mining
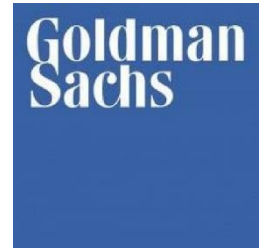
Systems & Networking

Computer architecture, Web technologies, Mobile app design, Distributed computing, Scientific computing, Software systems

Final Year Projects

- Research and development projects

  - Research Publications by CS Undergrads/Interns (https://www.cs.hku.hk/news-events/news-and-announcements/20211029_UG_RPub)
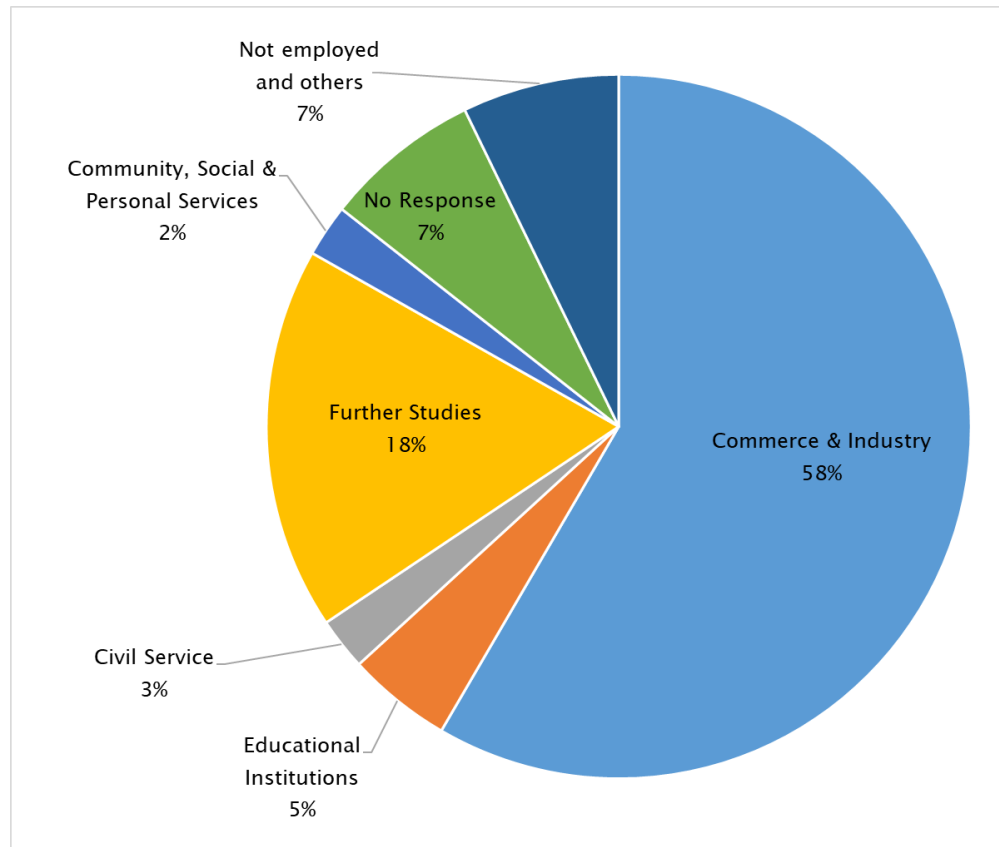
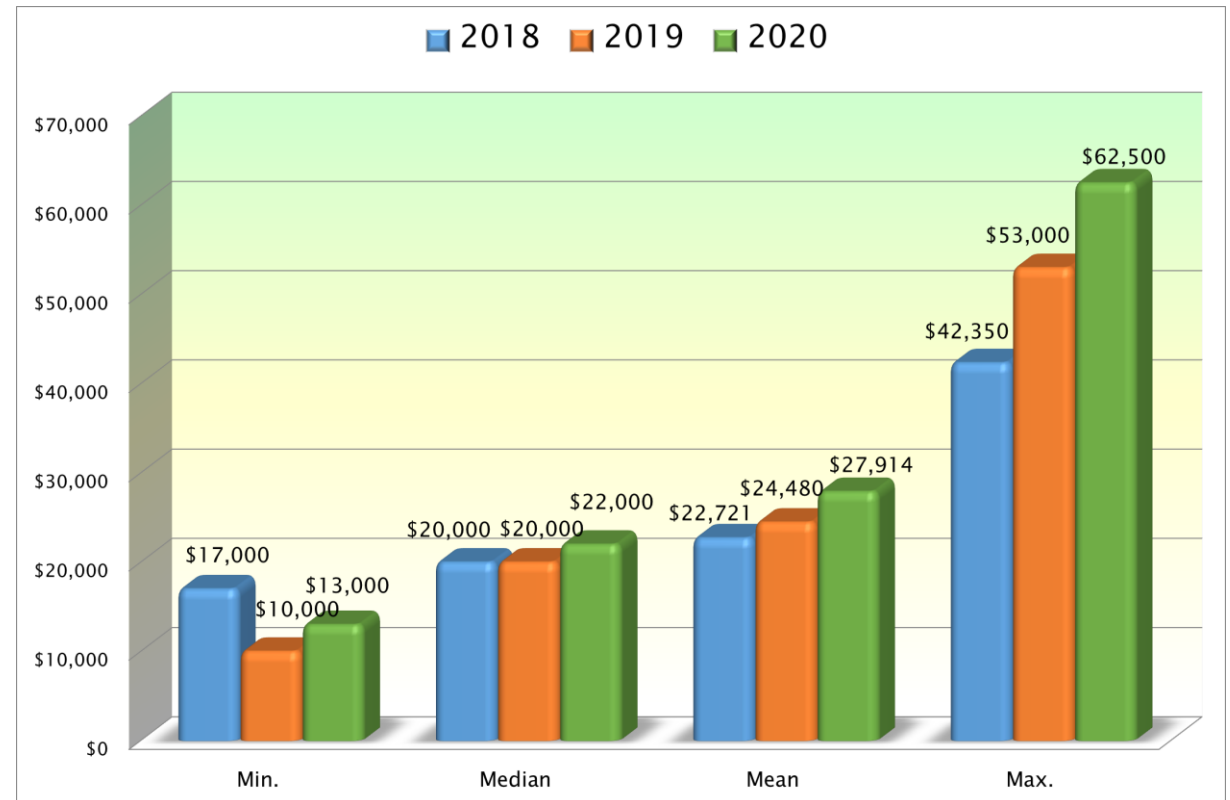- Industrial / community based projects

Internship

Career – 2020 Graduate Statistics

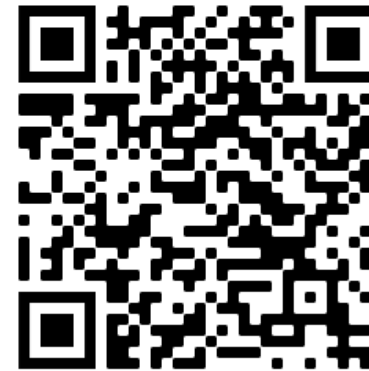Where did our 2020 graduates go?

Basic Salary of HKUCS Graduates

Department of Computer Science

- The youngest Department within the Engineering Faculty
  - Formally established in 1988
  - We have 37 full-time teaching members and we are still recruiting more

  - Five Research Groups
    - AI, Robotics, & Visual Computing
    - Cyber Security, FinTech, & Blockchain
    - Data Science and Engineering
    - Foundations of Computer Science, and
    - Systems and Networking

Further information

- Academic Advisor of Computer Science department:

  Dr. Anthony Tam (atctam@cs.hku.hk).

- Computer Science program: http://www.cs.hku.hk/programme/

- To download this briefing note and study plans: https://www.cs.hku.hk/programmes/beng-compsc/academic-advising

- Or access this web page via the QR code

More Information

Career – Graduate Statistics

Positions

	IT-related positions	Others
2020	95%	5%
2019	89%	11%
Examples	Business/System/Technical/Technology Analyst Consultant/Application Consultant IT Officer/Specialist/Technician Programmer/Developer/Software Engineer IT/Cloud/System Engineer Android/Game/Mobile App Developer UX Designer & Developer Web/Full Stack Developer Quantitative Researcher	Management Trainee Program Coordinator Financial Consultant Officer Teacher

Career – Graduate Statistics

Companies

	IT/Tech/Engg	Finance/Banking	Others
2020	53%	33%	14%
2019	45%	38%	17%
Examples	Accenture Alibaba Amazon ASM Pacific Technology Ltd Bloomberg ByteDance ESRI GoGoVan Google IBM China/Hong Kong Intel Microsoft Yahoo! Japan Corporation	Bank of America Merrill Lynch BNP Paribas Credit Suisse Group AG Deloitte Touche Tohmatsu Goldman Sachs (Asia) LLC KPMG Morgan Stanley Société Générale UBS AG	HK Jockey Club Hospital Authority South China Morning Post Cathay Pacific Airways Limited OGCIO HKU

Career – Useful References

- ACM Careers in Computing Website
  - http://computingcareers.acm.org/
- Target Jobs – IT and Technology
  - Specialisms:
    - https://targetjobs.co.uk/career-sectors/it-and-technology/advice/specialisms
  - Ten typical jobs graduates can do in IT:
    - https://targetjobs.co.uk/career-sectors/it-and-technology/advice/286189-ten-typical-jobs-graduates-can-do-in-it