



CS@SIT Tracks

A Brief

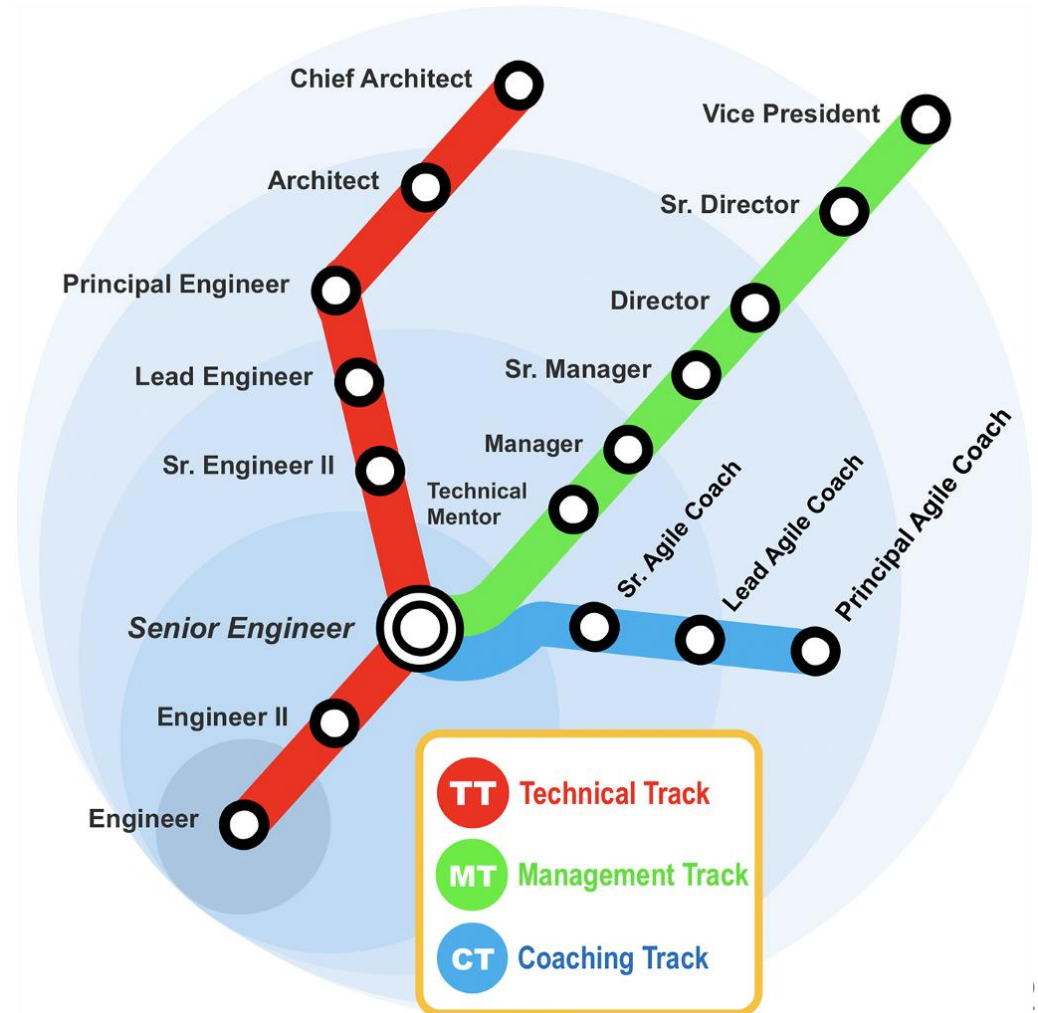
COMSCHI
INTER
- BANGMOD -

Program Specifics *cont'd*

Knowledge tracks

- Data Science
- Research
- Experiential Learning
- **Non-track**

**** Fast track OPTION possible ****



12-credit CS electives

“Current” Required Track Courses?

- Data Science (DS) – DS Track goes DEEP!

12 credits {

- Data Science

- Data Mining (prereq: DS)

- Machine Learning (Y3-2, soon A)

- Data Visualization

- Linear Algebra (mandatory Math elective)

- 1 DS Track elective, e.g. Big Data Analytics, NLP (prereq: ML) ✓

Free electives { Recommended: Probability

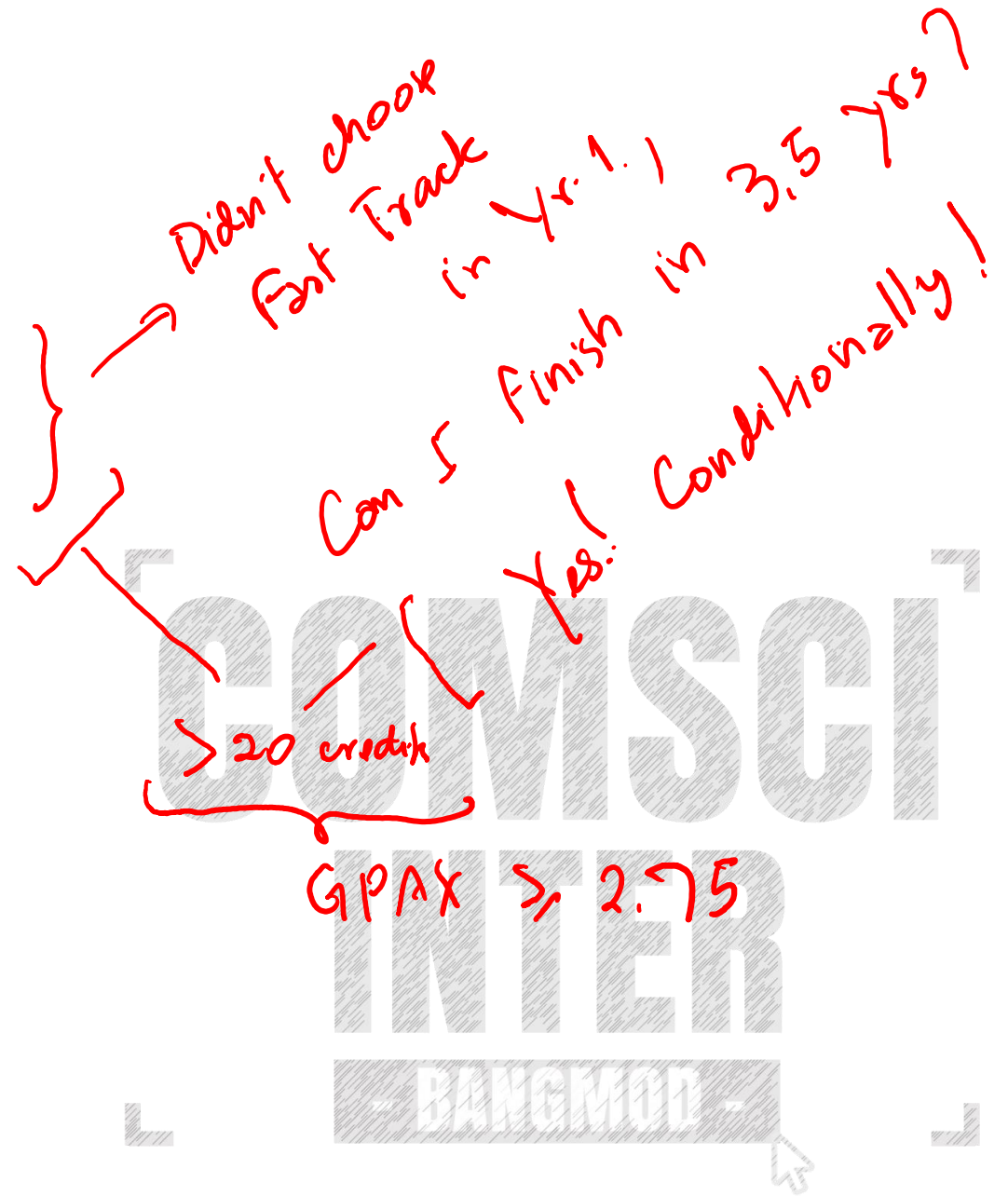
Cognitive Computing

“Current” Required Track Courses?

- Experiential Learning (EL) → 12 credit CS electives + 1-yr Internship
 - One (1) year in the industry (3rd or 4th year)
- Research (6-credits free for your CS electives)
 - Research Methodology ||| Seminar in CS } 15. } 12 credits.
- Important: Priorities are always given to students in the declared track first...

Some Q&A's ...

- When to choose “fast track”?
 - End of 1st year; Yr-1 GPAX ≥ 2.75
- When to choose “track”?
 - End of 2nd year
 - NO minimum GPAX



Data Science (Regular)

REGULAR BSc.CS. 2018 Curriculum Structure

0/0	1/1		1/2		1/S		2/1		2/2		2/S		3/1		3/2		3/S		4/1		4/2		4/S	
csc092 Comp Thinking	csc102 Intro to Prog	3	csc105 web app prog	3	Hackathon	0	csc220 Networks	3	csc217 OS	3			csc340 AI	3	csc498 Project 1	2	csc395 Internship	1	csc499 Project 2	3	csc490 Proj Pub	1		
	csc165 Dis Math	3	csc209 Data Stru	3			csc210 Algo	3	csc261 Stats	3	IRB		csc345 Data Science	3	csc532 ML	3	Internship Portfolio				csc536 Data Visualization	3		
			csc103 COA	3			csc218 DBMS	3							csc531 Data Mining	3			csc325 Security	3				
Eng Pre-course	csc101 Invent & Inno	1			Intensive Eng Writing	0			csc234 user-centd mobil	3			csc371 Dist. Sys.& Paral Com	3							csc302 Domain Sem [Enrol]	1	Domain Report / Portfolio	
	csc100 How to Learn	0	csc233 Paradigms	1			csc213 SA&D	3	csc231 Agile SE	3					csc319 Adv prog concepts	3					csc301 Global Emp [Enrol]	1		
							gen 352 Inno & Entre	3	gen351 Mod Mgmt	3			Math Elect (csc262 Lin Alg)	3					Sci Elect 1 (csc286 recom)	3				
	gen111 Man&Ethi	3	gen241 Beauty of Life	3			csc290 Integ Proj 1	0	csc291 Integ Proj 2	0				Domain SW Pitching					Sci Elect 2 (Phys 4 CS)	3				
	gen121 Probl Solv	3	gen101 PE	1															Physics Lab (1 cr)	0				
	gen 231 Thinking	3					[SCOPE]												Free Elect 1 (NLP / Big Data)	3				
					Math Tutor								MTH 101	3	MTH 102	3								
	LNG 105		LNG 106						LNG 107						LNG 241									
	LNG (3)	3	LNG (3)	3			LNG (1)	1	LNG (3)	3			LNG (3) - Free elect 2	3	LNG (1)	1			LNG (1)	1				
		19		17		0		16		18		0		18		15		1		16		6	126	

Data Science (Fast)

FAST BSc.CS. 2018 Curriculum Structure

0/0	1/1		1/2		1/S		2/1		2/2		2/S		3/1		3/2		3/S		4/1		4/2		4/S	
csc092 Comp Thinking	csc102 Intro to Prog	3	csc105 web app prog	3	Hackathon	0	csc220 Networks	3	csc217 OS	3			csc340 AI	3	csc498 Project 1	2	csc395 Internship	1	csc499 Project 2	3				
	csc165 Dis Math	3	csc209 Data Stru	3			csc210 Algo	3			IRB		csc345 Data Science	3	csc532 ML	3	Internship Portfolio		csc490 Proj Pub	1				
			csc103 COA	3			csc218 DBMS	3							csc531 Data Mining	3			csc325 Security	3				
Eng Pre-course	csc101 Invent & Inno	1	csc261 Stats	3	Intensive Eng Writing	0			csc234 user-centd mobil	3			csc371 Dist. Sys.& Paral Com	3										
	csc100 How to Learn	0	csc233 Paradigms	1			csc213 SA&D	3	csc231 Agile SE	3					csc319 Adv prog concepts	3			csc302 Domain Sem [Enrol]	1	Domain Report / Portfolio			
							gen 352 Inno & Entre	3	gen351 Mod Mgmt	3			Math Elect (csc262 Lin Alg)	3					csc301 Global Emp [Enrol]	1				
	gen111 Man&Ethi	3	gen241 Beauty of Life	3			csc290 Integ Proj 1	0	csc291 Integ Proj 2	0				Domain SW Pitching					Sci Elect 2 (Phys 4 CS)	3	[WiL] / [Exch]			
	gen121 Probl Solv	3	gen101 PE	1									Sci Elect 1 (csc286 recom)	3					Physics Lab (1 cr)	0				
	gen 231 Thinking	3					[SCOPE]								csc536 Data Visualization	3								
					Math Tutor		MTH 101	3	MTH 102	3									Free Elect 1 (NLP / Big Data)	3				
	LNG 105		LNG 106						LNG 107						LNG 241									
	LNG (3)	3	LNG (3)	3			LNG (1)	1	LNG (3)	3			LNG (3) - Free elect 2	3	LNG (1)	1			LNG (1)	1				
		19		20		0		19		18		0		18		15		1		16		0	126	

Research (Fast)

FAST BSc.CS. 2018 Curriculum Structure

0/0	1/1		1/2		1/5		2/1		2/2		2/5		3/1		3/2		3/5		4/1		4/2		4/5	
csc092 Comp Thinking	csc102 Intro to Prog	3	csc105 web app prog	3	Hackathon	0	csc220 Networks	3	csc217 OS	3			Core Elect 1 (Research Metho)	3	csc498 Project 1	2	csc395 Internship	1	csc499 Project 2	3				
	csc165 Dis Math	3	csc209 Data Stru	3			csc210 Algo	3			IRB		Core Elect 2 (CS Seminar)	3	Core Elect 3	3	Internship Portfolio							
			csc103 COA	3			csc218 DBMS	3					csc340 AI	3	Core Elect 4	3			csc325 Security	3				
Eng Pre-course	csc101 Invent & Inno	1	csc261 Stats	3	Intensive Eng Writing	0			csc234 user-centd mobil	3					csc319 Adv prog concepts	3			csc490 Proj Pub	1				
	csc100 How to Learn	0	csc233 Paradigms	1			csc213 SA&D	3	csc231 Agile SE	3			csc371 Dist. Sys.& Paral Com	3					csc302 Domain Sem [Enrol]	1	Domain Report / Portfolio			
							gen 352 Inno & Entre	3	gen351 Mod Mgmt	3			Math Elect	3					csc301 Global Emp [Enrol]	1				
	gen111 Man&Ethi	3	gen241 Beauty of Life	3			csc290 Integ Proj 1	0	csc291 Integ Proj 2	0			[Exch]	Domain SW Pitching					Sci Elect 1	3	[WIL] / [Exch]			
	gen121 Probl Solv	3	gen101 PE	1															Sci Elect 2 (Phys 4 CS)	3				
	gen 231 Thinking	3					[SCOPE]								Free Elect 1	3			Physics Lab (1 cr)	0				
					Math Tutor		MTH 101	3	MTH 102	3														
	LNG-105		LNG-106						LNG-107															
	LNG (3)	3	LNG (3)	3			LNG (1)	1	LNG (3)	3			LNG (3) - Free elect 2	3	LNG (1)	1			LNG (1)	1				
		19		20		0		19		18		0		18		15		1		16		0		126

ELITE (Honors-Research 3.5 years)

Two (2) Core Electives must be
 ** Research Methodology
 ** Seminar in CS
 ** Can choose other electives from either tracks

AI may be taken as a MOOC course.
 [Encouraged...]

Experiential Learning (Fast / Yr-3)

FAST BSc.CS. 2018 Curriculum Structure

0/0	1/1		1/2		1/S		2/1		2/2		2/S		3/1		3/2		3/S		4/1		4/2		4/S	
csc092 Comp Thinking	csc102 Intro to Prog	3	csc105 web app prog	3	Hackathon	0	csc220 Networks	3	csc217 OS	3							csc395 Internship	1	csc498 Project 1	2	csc499 Project 2	3		
	csc165 Dis Math	3	csc209 Data Stru	3			csc210 Algo	3			IRB		WIL 1	6	WIL 2	6					csc490 Proj Pub	1		
			csc103 COA	3			csc218 DBMS	3				Internship Portfolio		Domain SW Pitching					csc325 Security	3				
Eng Pre-course	csc101 Invent & Inno	1	csc261 Stats	3	Intensive Eng Writing	0			csc234 user-centd mobil	3			csc371 Dist. Sys.& Paral Com	3							csc319 Adv prog concepts	3		
	csc100 How to Learn	0	csc233 Paradigms	1			csc213 SA&D	3	csc231 Agile SE	3					csc340 AI (MOOC)	3			Sci Elect 1 (Phys 4 CS)	3				
							gen 352 Inno & Entre	3	gen351 Mod Mgmt	3									Physics Lab (1 cr)	0	csc302 Domain Sem [Enrol]	1	Domain Report / Portfolio	
	gen111 Man&Ethi	3	gen241 Beauty of Life	3			csc290 Integ Proj 1	0	csc291 Integ Proj 2	0									Sci Elect 2	3	csc301 Global Emp [Enrol]	1		
	gen121 Probl Solv	3	gen101 PE	1															Math Elect	3				
	gen 231 Thinking	3					[SCOPE]														Free Elect 1	3		
					Math Tutor		MTH 101	3	MTH 102	3														
	LNG-105		LNG-106						LNG-107										LNG (3) - Free elect 2	3	LNG-241			
	LNG (3)	3	LNG (3)	3			LNG (1)	1	LNG (3)	3									LNG (1)	1	LNG (1)	1		
		19		20		0		19		18		0		9		9		1		18		13	126	



Experiential Learning (Fast / Yr-4)

FAST BSc.CS. 2018 Curriculum Structure

0/0	1/1		1/2		1/5		2/1		2/2		2/5		3/1		3/2		3/5		4/1		4/2		4/5	
csc092 Comp Thinking	csc102 Intro to Prog	3	csc105 web app prog	3	Hackathon	0	csc220 Networks	3	csc217 OS	3			csc340 AI	3			csc395 Internship	1	csc498 Project 1	2	csc499 Project 2	3		
	csc165 Dis Math	3	csc209 Data Stru	3			csc210 Algo	3			IRB		csc325 Security	3		Internship Portfolio			WiL 1	6	WiL 2	6		
			csc103 COA	3			csc218 DBMS	3					Domain SW Pitching								csc490 Proj Pub	1		
Eng Pre-course	csc101 Invent & Inno	1	csc261 Stats	3	Intensive Eng Writing	0			csc234 user-centd mobil	3			csc371 Dist. Sys.& Paral Com	3	csc319 Adv prog concepts	3								
	csc100 How to Learn	0	csc233 Paradigms	1			csc213 SA&D	3	csc231 Agile SE	3			Sci Elect 1 (Phys 4 CS)	3										
							gen 352 Inno & Entre	3	gen351 Mod Mgmt	3			Physics Lab (1 cr)	0	csc302 Domain Sem [Enrol]	1	Domain Report / Portfolio							
	gen111 Man&Ethi	3	gen241 Beauty of Life	3			csc290 Integ Proj 1	0	csc291 Integ Proj 2	0			Sci Elect 2	3	csc301 Global Emp [Enrol]	1								
	gen121 Probl Solv	3	gen101 PE	1															Math Elect	3				
	gen 231 Thinking	3					[SCOPE]								Free Elect 1	3								
					Math Tutor		MTH 101	3	MTH 102	3														
	LNG-105		LNG-106						LNG-107				LNG (1)	1	LNG-241									
	LNG (3)	3	LNG (3)	3			LNG (1)	1	LNG (3)	3			LNG (3) - Free elect 2	3	LNG (1)	1								
		19		20		0		19		18		0		19		9		1			11		10	126

Some Q&A's ...

- Core and elective courses?

- General Education
- Math Core
- CS Core
- Core Electives
 - Professional Electives
 - Math Elective
 - Natural Science Electives
 - CS Electives
- Free Electives

31 credits ✓

12 credits ✓

51 credits ✓

26 credits

5 credits (all mandatory)

3 credits

6 credits (minimum)

12 credits

6 credits

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CS code with virtual labs & some prog. anyfr.

Some Q&A's ...

• About Math requirements?

2.1 วิชาแกนทางด้านคณิตศาสตร์		12 หน่วยกิต
CSC 165	คณิตศาสตร์ดิสครีต (Discrete Mathematics)	3(3-0-6)
CSC 261	สถิติสำหรับนักวิทยาศาสตร์ (Statistics for Scientists)	3(3-0-6)
MTH 101	คณิตศาสตร์ 1 (Mathematics I)	3(3-0-6)
MTH 102	คณิตศาสตร์ 2* (Mathematics II)	3(3-0-6)
CSC 264	ความน่าจะเป็นสำหรับนักวิทยาการคอมพิวเตอร์* (Probability for Computer Scientists)	3(3-0-6)
CSC 266	วิธีการคำนวณเชิงตัวเลขเบื้องต้น* (Introduction to Numerical Methods)	3(3-0-6)
* เลือก 1 รายวิชาจาก MTH 102, CSC 264 และ CSC 266		

2.3.3 วิชาเลือกเฉพาะด้านคณิตศาสตร์		3 หน่วยกิต
CSC 262	พีชคณิตเชิงเส้นเพื่อการประยุกต์ใช้วิทยาการคอมพิวเตอร์ (Linear Algebra for Computer Science Applications)	3(3-0-6)
CSC 269	การศึกษาเฉพาะเรื่องคณิตศาสตร์สำหรับนักวิทยาการคอมพิวเตอร์ (Selected Mathematics Topic for Computer Scientists)	3(3-0-6)
MTH 234	พีชคณิตเชิงเส้น (Linear Algebra)	3(3-0-6)
MTH 102	คณิตศาสตร์ 2* (Mathematics II)	3(3-0-6)
CSC 264	ความน่าจะเป็นสำหรับนักวิทยาการคอมพิวเตอร์* (Probability for Computer Scientists)	3(3-0-6)
CSC 266	วิธีการคำนวณเชิงตัวเลขพื้นฐาน* (Introduction to Numerical Methods)	3(3-0-6)
* ไม่สามารถเลือกซ้ำกับวิชาแกนคณิตศาสตร์ได้		

2.3.4 วิชาเลือกเฉพาะด้านวิทยาศาสตร์ธรรมชาติ		อย่างน้อย 6 หน่วยกิต
CSC 282	วิทยาการการรู้เบื้องต้น (Introduction to Cognitive Science)	3(3-0-6)
CSC 287-288	การศึกษาเฉพาะเรื่องวิทยาศาสตร์ธรรมชาติสำหรับ นักวิทยาการคอมพิวเตอร์ 1, 2 (Selected Natural Science Topic for Computer Scientists I, II)	3(2-2-5)
CSC 289	การศึกษาเฉพาะเรื่องวิทยาศาสตร์ธรรมชาติไม่มีการ ฝึกปฏิบัติการสำหรับนักวิทยาการคอมพิวเตอร์ (Selected Non-Laboratory Natural Science Topic for Computer Scientists)	3(3-0-6)
CHM 103	เคมีพื้นฐาน (Fundamental Chemistry)	3(3-0-6)
CHM 160	ปฏิบัติการเคมี (Chemistry Laboratory)	1(0-3-2)
MIC 101	ชีววิทยาทั่วไป (General Biology)	3(3-0-6)
MIC 191	ปฏิบัติการชีววิทยาทั่วไป (General Biology Laboratory)	1 (0-3-2)
PHY 103-104	ฟิสิกส์ทั่วไปสำหรับนักศึกษาวิศวกรรมศาสตร์ 1, 2 (General Physics for Engineering Students I, II)	3(3-0-6)
PHY 191-192	ปฏิบัติการฟิสิกส์ทั่วไป 1, 2 (General Physics Laboratory I, II)	1(0-2-2)

Some Q&A's ...

- What about Natural Science?
 - Must have “LABORATORY”!



Final Notes

- English Requirements

- TETET 3.5 or equivalent

Free for 1st time taking

- IRB

- <https://ethics.kmutt.ac.th/traning2set/>

2-yr validity
should wait at least until this summer

Must pass the IRB

some time before registering for yrs 2-3

Would recommend TOEFL, IELTS, TOEIC
exp.
TOEFL ITP
Check with ELCs
could be cheaper than TETET

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