PIAIC Quarter 1
Weekly Live Review Class & Coding Workshop Schedule & Details

https://www.piaic.org

April 3, 2020

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Schedule of Weekly Live Review Classes

PIAIC General

Live Stream Available on:
Facebook: https://www.facebook.com/groups/piaic/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

The following topics will be covered in during the below sessions:

Faculty	Day	Timing
Adil Altaf	Every Friday First class on April 10	9 PM - 11 PM

Git

Live Stream Available on:
Facebook: https://www.facebook.com/groups/piaic/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

The following topics will be covered in during the below sessions:
Version Control using Git and GitHub

Note: This class is mandatory for all students

Faculty	Day	Timing
Zeeshan Hanif	Every Friday First class on May 29	8 PM - 10 PM

Artificial Intelligence

Live Stream Available on:
Facebook: https://www.facebook.com/groups/deep.learning.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

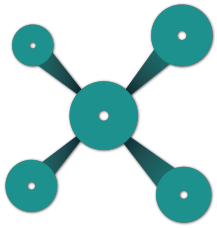
Student Telegram Chat Group: PIAIC-AI

The following topics will be covered in during the below sessions:
Artificial Intelligence for Everyone | Python Programming

Students may select any section based on their day and time preferences.

Section	Faculty	Day	Timing
1 Sunday Night	Inam Haq	Every Sunday First class on April 12	9 PM - 11 PM

	2 Monday Night	Nasir Hussain	Every Monday First class on April 13	9 PM - 11 PM
	3 Saturday Afternoon	Anees Ahmed	Every Saturday First class on April 18	4 PM - 6 PM
	4 Saturday Night	Muhammad Qasim	Every Saturday First class on April 18	9 PM - 11 PM



Internet of Things

Live Stream Available on:
Facebook: https://www.facebook.com/groups/aiot.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-IoT

The following topics will be covered in during the below sessions:
IoT Fundamentals | Rust Programming

Students may select any section based on their day and time preferences.

Section	Faculty	Day	Timing
1 Sunday Afternoon	Imran Ali	Every Sunday First class on April 12	12 PM - 2 PM
2 Saturday Afternoon	Fahim-Uz-Zaman	Every Saturday First class on April 18	2 PM - 4 PM

Cloud Native

Live Stream Available on:
Facebook: https://www.facebook.com/groups/cloud.native.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-CN

The following topics will be covered in during the below sessions:
Linux | Docker | Kubernetes

Students may select any section based on their day and time preferences.

	Section	Faculty	Day	Timing
	1 Sunday Afternoon	Aamir Pinger	Every Sunday First class on April 12	4 PM - 6 PM
	2 Wed. Night	Daniyal Nagori	Every Wednesday First class on April 15	9 PM - 11 PM
	3 Saturday Afternoon	Mohsin Khalid	Every Saturday First class on April 18	12 PM - 2 PM

Blockchain

Live Stream Available on:
Facebook: https://www.facebook.com/groups/cryptowitai.blockchain/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-BC

The following topics will be covered in during the below sessions:
Blockchain Business Foundations

Students may select any section based on their day and time preferences.

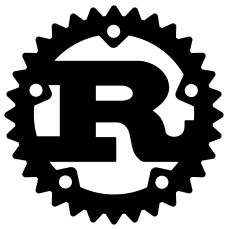
Section	Faculty	Day	Timing
1 Sunday Afternoon	Ahmad Manzoor	Every Sunday First class on April 12	2 PM - 4 PM
2 Tuesday Night	Zeeshan Hanif	Every Tuesday First class on April 14	9 PM - 11 PM

Schedule of Weekly Workshops

<table>
<tr><td rowspan="3"> 
Python Programming (Artificial Intelligence)</td><td colspan="3">Live Stream Available on:
Facebook: https://www.facebook.com/groups/deep.learning.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-AI

The following topics will be covered in during the below sessions:
Python Programming</td></tr>
<tr><td>Faculty</td><td>Day</td><td>Timing</td></tr>
<tr><td>Nasir Hussain
Muhammad Qasim</td><td>Every Thursday

First class on May 7th</td><td>9 PM - 11 PM</td></tr>
<tr><td rowspan="3"> 
Rust Programming (Internet of Things)</td><td colspan="3">Live Stream Available on:
Facebook: https://www.facebook.com/groups/aiot.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-IoT

The following topics will be covered in during the below sessions:
Rust Programming</td></tr>
<tr><td>Faculty</td><td>Day</td><td>Timing</td></tr>
<tr><td>Imran Ali</td><td>Every Tuesday

First class on May 5th</td><td>4 PM - 6 PM</td></tr>
<tr><td rowspan="3"> 
Linux + Docker + Kubernetes (Cloud Native Computing)</td><td colspan="3">Live Stream Available on:
Facebook: https://www.facebook.com/groups/cloud.native.edu/
YouTube:https://www.youtube.com/channel/UC2Makv_pLAtvrjHNgg-pBLg/

Student Telegram Chat Group: PIAIC-CN

The following topics will be covered in during the below sessions:
Linux | Docker | Kubernetes</td></tr>
<tr><td>Faculty</td><td>Day</td><td>Timing</td></tr>
<tr><td>Adil Altaf
Ameen Alam</td><td>Every Wednesday

First class on April 15th</td><td>4 PM - 6 PM</td></tr>
</table>

Weekly Live Review Class Schedule

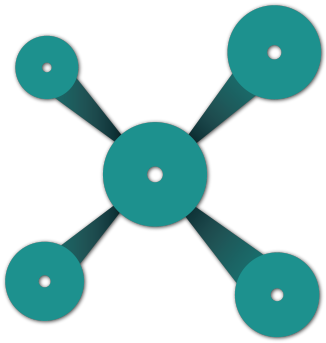
PIAIC programs are divided into multiple quarters, each having a duration of 3 months. Although online students are able to self study at their own pace, this weekly schedule will serve to keep students on track by providing a weekly baseline.

To assist online students, PIAIC will conduct live review classes according to the following schedule for each of the available programs. Students will be able to participate in these live review classes via Facebook and YouTube.

The following weekly sessions will be held for all Quarter 1 online students:

Artificial Intelligence

Cloud Native Computing



Internet of Things

Blockchain

Git

PIAIC General

A checklist of videos has also been made available to all students. You may make a copy of the checklist to use it: [PIAIC Q1 Video Checklist]

Artificial Intelligence

Week	Topics Covered	PIAIC Videos	Date
1	**Introduction to Machine Learning, Data Science, and AI** Artificial Intelligence for Everyone *Source:* Coursera Note: All optional sections in the Coursera AI for Everyone course are required sections in this course.	AIC001 - AIC022	Week of April 12, 2020
2	**Introduction to Machine Learning, Data Science, and AI (Continued)** Artificial Intelligence for Everyone *Source:* Coursera Note: All optional sections in the Coursera AI for Everyone course are required sections in this course.	AIC023 - AIC037	Week of April 19, 2020
3	**Quiz 1: Artificial Intelligence for Everyone**	AIC001 - AIC037	Week of April 26, 2020
4	**Python Programming Part 1** Chapters 1 - 15 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC038 - AIC049	Week of May 3, 2020
5	**Python Programming Part 1 (Continued)** Chapters 16 - 20 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC050 - AIC059	Week of May 10, 2020
6	**Python Programming Part 1 (Continued)** Chapters 21 - 24 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC060 - AIC069	Week of May 17, 2020
7	**Python Programming Part 1 (Continued)** Chapters 25 - 40 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC070 - AIC081	Week of May 24, 2020
8	**Quiz 2: Programming with Python (Part I)** Chapters 1 - 40 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC038 - AIC081	Week of May 31, 2020
9	**Python Programming Part 2** Chapters 41 - 45 of *A Smarter Way to Learn Python: Learn it*	AIC082 - AIC086	Week of June 7,

	faster. *Remember it Longer* by Mark Myers		2020
10	**Python Programming Part 2 (Continued)** Chapters 46 - 50 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC087 - AIC092	Week of June 14, 2020
11	**Python Programming Part 2 (Continued)** Chapters 51 - 61 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC093 - AIC094	Week of June 21, 2020
12	**Python Programming Part 2 (Continued)** Chapters 62 - 77 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC095 - AIC099	Week of June 28, 2020
13	**Quiz 3: Programming with Python (Part II)** Chapters 1 - 77 of *A Smarter Way to Learn Python: Learn it faster.* *Remember it Longer* by Mark Myers	AIC082 - AIC099	Week of July 5, 2020

Internet of Things

Week	Topics Covered	PIAIC Videos	Date
1	**Introduction to Internet of Things and Embedded Systems** ● What is the Fourth Industrial Revolution? ● What is IoT? ● Embedded Systems ● Hardware and Software for IoT ● Edge and Cloud Computing ● The future of IoT is AI ● Blockchain in the Internet of Things? ● IoT + AI + Blockchain: The Fourth Industrial Revolution has begun	IOT001 - IOT047	Week of April 12, 2020
2	**Introduction to Internet of Things and Embedded Systems** ● What is the Fourth Industrial Revolution? ● What is IoT? ● Embedded Systems ● Hardware and Software for IoT ● Edge and Cloud Computing ● The future of IoT is AI ● Blockchain in the Internet of Things? ● IoT + AI + Blockchain: The Fourth Industrial Revolution has begun	IOT048 - IOT107	Week of April 19, 2020
3	**Quiz 1: Introduction to Internet of Things (IoT)** ● **Introduction to Internet of Things and Embedded Systems**	IOT001 - IOT107	Week of April 26, 2020
4	**Rust Programming Part 1** ● Chapter 3 of https://doc.rust-lang.org/nightly/book/ ● Read & Watch: https://hub.packtpub.com/rust-is-the-future-of-systems-programming-c-is-the-new-assembly-intel-principal-engineer-josh-triplett/	IOT124 - IOT145	Week of May 3, 2020
5	**Rust Programming Part 2** Chapter 4.1 and 4.2 of https://doc.rust-lang.org/nightly/book/	IOT146 - IOT165	Week of May 10, 2020
6	**Rust Programming Part 3** Chapter 5 of https://doc.rust-lang.org/nightly/book/	IOT166 - IOT183	Week of May 17, 2020
7	**Quiz 2: Rust Programming I** Chapter 3, 4.1, 4.2, and 5 of https://doc.rust-lang.org/nightly/book/	IOT124 - IOT183	Week of May 24, 2020
8	**Rust Programming Part 4**	IOT184 -	Week of May 31,

	Chapter 3.2, 6.1, and 6.2 of https://doc.rust-lang.org/nightly/book/	IOT200	2020
9	**Rust Programming Part 4 (Continued)** Chapter 7 of https://doc.rust-lang.org/nightly/book/	IOT201 - IOT227	Week of June 7, 2020
10	**Rust Programming Part 4 (Continued)** Chapter 8 of https://doc.rust-lang.org/nightly/book/	IOT228 - IOT258	Week of June 14, 2020
11	**Rust Programming Part 4 (Continued)** Chapter 9 of https://doc.rust-lang.org/nightly/book/	IOT259 - IOT270	Week of June 21, 2020
12	**Quiz 3: Rust Programming II** Chapter .2, 6.1, 6.2, 7, 8, and 9 of https://doc.rust-lang.org/nightly/book/	IOT184 - IOT270	Week of June 28, 2020

Cloud Native Computing

Week	Topics Covered	PIAIC Videos	Date
1	**Cloud Native: The Modern Way to Develop Software** • What is Cloud-Native? Is It Hype or The Future of Software Development? • What is cloud-native? The modern way to develop software • Cloud Native: A New Wave of Digital Disruption • The CNCF sees a surge in cloud-native adoption • 10 KEY ATTRIBUTES OF CLOUD-NATIVE APPLICATIONS • Why Developers And Business Leaders Are Going Cloud Native • Cloud Native Case Study: Pinning its Past, Present, and Future on Cloud Native • Why the Adoption of Kubernetes Will Explode • Report Finds Kubernetes Job Market Hot	CNC001 - CNC013	Week of April 12, 2020
2	**Linux** Chapters 1, 2, 4, 5, 7, 8, and 9 from *Linux: Easy Linux for Beginners* by Felix Alvaro	CNC014 - CNC023	Week of April 19, 2020
3	**Linux (Continued)** Chapters 1, 2, 4, 5, 7, 8, and 9 from *Linux: Easy Linux for Beginners* by Felix Alvaro	CNC024 - CNC038	Week of April 26, 2020
4	**Quiz 1: Linux** Chapters 1, 2, 4, 5, 7, 8, and 9 from *Linux: Easy Linux for Beginners* by Felix Alvaro	CNC014 - CNC038	Week of May 3, 2020
5	**Docker** Chapters 1 to 6 of *Docker Deep Dive* by Nigel Poulton	CNC039 - CNC057	Week of May 10, 2020
6	**Docker (Continued)** Chapters 7 to 8 of *Docker Deep Dive* by Nigel Poulton	CNC058 - CNC067	Week of May 17, 2020
7	**Quiz 2: Docker** Chapters 1 to 8 of *Docker Deep Dive* by Nigel Poulton	CNC039 - CNC067	Week of May 24, 2020
8	**Kubernetes Part 1** Chapter 1 to 2 of *Kubernetes in Action* by Marko Luksa	CNC068 - CNC083	Week of May 31, 2020
9	**Kubernetes Part 1 (Continued)** Chapter 3 of *Kubernetes in Action* by Marko Luksa	CNC084 - CNC110	Week of June 7,

			2020
10	**Kubernetes Part 1 (Continued)** Chapter 4 of *Kubernetes in Action* by Marko Luksa	CNC111 - CNC122	Week of June 14, 2020
11	**Quiz 3: Kubernetes Part 1** Chapter 1 to 4 of *Kubernetes in Action* by Marko Luksa	CNC068 - CNC122	Week of June 21, 2020
12	**Kubernetes Part 2** Chapter 5 to 6 of *Kubernetes in Action* by Marko Luksa	CNC123 - CNC147	Week of June 28, 2020
13	**Kubernetes Part 2 (Continued)** Chapter 7 & 9 of *Kubernetes in Action* by Marko Luksa	CNC148 - CNC169	Week of July 5, 2020
14	**Quiz 4: Kubernetes Part 2** Chapter 5, 6, 7 & 9 of *Kubernetes in Action* by Marko Luksa	CNC123 - CNC169	Week of July 12, 2020

Blockchain

Week	Topics Covered	PIAIC Videos	Date
1	**Fundamentals of Blockchain** Why Blockchain What is Blockchain? Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide	BCC001 - BCC016	Week of April 12, 2020
2	**Fundamentals of Blockchain (Continued)** Bitcoin, Double Spending and Wallets ● https://bitcoin.stackexchange.com/questions/8172/what-happens-if-two-miners-mine-the-next-block-at-the-same-time/8174 ● https://coinsutra.com/bitcoin-double-spending/ Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide	BCC017 - BCC021	Week of April 19, 2020
3	**Fundamentals of Blockchain (Continued)** Transaction Input Output, Change and Mining ● https://www.coindesk.com/information/how-do-bitcoin-transactions-work/ Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide	BCC022 - BCC028	Week of April 26, 2020
4	**Fundamentals of Blockchain (Continued)** Public Key Cryptography & Merkle Tree ● https://bitzuma.com/posts/six-things-bitcoin-users-should-know-about-private-keys/ ● https://bitcoin.stackexchange.com/questions/43546/does-the-private-key-of-bitcoin-change-everytime-the-address-changes ● https://www.webopedia.com/TERM/H/hashing.html ● https://coincentral.com/merkle-tree-hashing-blockchain/ Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide	BCC029 - BCC030	Week of May 3, 2020
5	**Fundamentals of Blockchain (Continued)** Distributed Trustless Consensus ● https://keepingstock.net/explaining-blockchain-how-proof-of-work-enables-trustless-consensus-2abed27f0845 ● https://101blockchains.com/consensus-algorithms-block	BCC031 - BCC039	Week of May 10, 2020

	chain/ • Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos • Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide		
6	**Quiz 1: Bitcoin & Blockchain** • Chapter 1 & 2 of *Mastering Bitcoin: Programming the Open Blockchain 2nd Edition* by Andrea Antonopoulos • Chapters 1, 2, 3, 4, 5, 6, 7, and 8 from CBBF Official Exam Study Guide • Also all Articles mentioned above in Weeks 1 - 5	BCC001 - BCC039	Week of May 17, 2020
7	**Blockchain 2.0 and Ethereum Part 1** • Chapters 9 and 10 from CBBF Official Exam Study Guide • What is Ethereum? • Introduction • Object-Oriented Programming: Objects, Classes & Methods • What's the difference between a solidity contract and an OOP class?	BCC040 - BCC056	Week of May 24, 2020
8	**Blockchain 2.0 and Ethereum Part 2** • Ethereum Client (Parity not covered) • Ethereum Testnets • Keys and Addresses (Just study the Introduction) • Wallets (only up to Wallet Best Practices) • Transactions (Digital signatures section not included) •	BCC057 - BCC065	Week of May 31, 2020
9	**Quiz 2: Ethereum and Blockchain** • Chapters 9 and 10 from CBBF Official Exam Study Guide • Also all Articles mentioned above in Weeks 7 - 8	BCC040 - BCC065	Week of June 7, 2020

10	**Blockchain 2.0 and Ethereum Part 3**
	• What is a Smart Contract (till Building a smart contract with Solidity)
	• Why Many Smart Contract Use Cases Are Simply Impossible
	• Deploying Smart Contracts
	• Tokens
	  ○ What are tokens?
	  ○ How are tokens used?
	  ○ Tokens and fungibility
	  ○ Counterparty Risk
	  ○ Tokens and intrinsicality
	  ○ Using tokens: utility or equity
	  ○ Token Standards (Just the very basics and a little bit of ERC20)
		BCC065 - BCC087	Week of June 14, 2020

11	**Private Blockchain Technologies** ● Blockchain Technology: Architecture, Consensus, and Future Trends ● A gentle introduction to The Hyperledger Project Hyperledger ● What's the Difference Between the 5 Hyperledger Blockchain Projects? ● The top 5 enterprise blockchain platforms you need to know about ● Different Smart Contract Platforms	BCC088 - BCC108	Week of June 21, 2020
12	**Blockchain Use Cases and Verticals** ● Chapters 11 and 12 from CBBF Official Exam Study Guide ● Chapter 2 Summary, Chapter 3 From Building Ethereum ĐApps ● Chapters 13 and 14 from CBBF Official Exam Study Guide	-	Week of June 28, 2020
13	**Quiz 3: Blockchain** ● Chapters 9 to 12 from CBBF Official Exam Study Guide ● Chapter 2 Summary, Chapter 3 From Building Ethereum ĐApps ● Chapters 13 and 14 from CBBF Official Exam Study Guide ● Also all Articles mentioned above in Weeks 10 - 12	BCC065 - BCC108	Week of July 5, 2020

Important Notes

1. Dates for Quiz 1 of Quarter 1 AI, IoT, Cloud and Blockchain will be announced soon and scheduled in April. You will give your exam at home using the Safe Exam Browser, please install it:

   https://safeexambrowser.org/download_en.html

2. The schedule for Live Coding Workshops will be announced at a later date after we start coding in our classes.
3. Innovation Program classes will also be announced at a later date. These will be mandatory for all students.
4. Students must allow StreamYard access to their Facebook account information to show their names in the live stream. Otherwise their comments will remain anonymous. To allow access, visit: www.streamyard.com/facebook
5. A timetable with dates for each section of classes is available here: PIAIC Quarter 1 Review Class Schedule
6. A checklist of videos has also been made available to all students. You may make a copy of the checklist to use it: PIAIC Q1 Video Checklist