

21 Mar 2024

To whom it may concern

Re: Letter of Recommendation for Aiden Brevia (IC: Txxxx366F)

It gives me great pleasure to write this letter of reference for Aiden Brevia. Since 2020, Aiden has been attending courses at Coding Lab, where he has undergone training for over 110 hours in Python programming, App development, and on the Micro:bit, using Python Editor and Microsoft MakeCode.

Throughout his time with us, Aiden has breezed through the basics of programming with topics such as Data Types, Conditionals, Loops, Functions, Lists, Dictionaries, Exception Handling, including the utilization of modules such as Random, Math, and Matplotlib. He also takes great interest in delving into advanced methods and functions not taught in class and using them to create his own projects.

He is also familiar with hardware programming, having integrated additional sensors with the Micro:Bit such as infra-red distance sensors and speakers which have applications in a Music Player and an autonomous vehicle. He has also completed work with the mBot, which included lessons on Ultrasound and infra-red sensors, culminating in a hackathon for a treasure hunt.

Aiden's key strengths include the ability to apply coding to create unique projects across different subject domains such as mathematics and science. Aiden's notable projects include a simulation of the solar system, a Space War Game based on Python Turtle followed by a messenger app and a health companion program on App Inventor. He has also been selected by his school to participate in the [Hwa Chong Info-Communications Challenge 2024](#).

Aiden is an outgoing and diligent student who has delved comprehensively into diverse programming topics, showcasing a profound interest and aptitude for coding. As an independent coder, he manifests robust logical and computational thinking, approaching challenging programming tasks with unwavering determination and perseverance. He also actively participates in class discussions by showing willingness and motivation with constant contribution of innovative ideas, valuable suggestions and comments to address programming challenges for the class.

I have every confidence that Aiden will be an excellent addition to your student body. I highly recommend Aiden and look forward to seeing him shine in your institution.

Thank You,



Foo Yong Ning, SM, MIT  
Director  
Coding Lab Asia

Transcript of Records of study at Coding Lab

This letter serves to verify that Aiden Breva (IC: Txxxx366F) has attended the following courses with us:

No	Course Code & Name	Course Duration	Course Duration (YYYY-MM)	Course Outline
1	P102 - Scratch 2 (Ages 7-9)	10 Hours	2020-08	<ul style="list-style-type: none"><li>➤ <u>Quick Recap of Scratch 1 and Storyboards</u><ul style="list-style-type: none"><li>○ Plan storyboard outline of games</li></ul></li><li>➤ <u>Key Game Features</u><ul style="list-style-type: none"><li>○ Scenes and transitions</li><li>○ Level system</li><li>○ Broadcast function</li><li>○ Blocks creation (Reusing code)</li></ul></li><li>➤ <u>Games</u><ul style="list-style-type: none"><li>○ Fundamentals of game development</li><li>○ Creation of game of your choice</li></ul></li><li>➤ <u>Development of own Project</u><ul style="list-style-type: none"><li>○ (Game/Story/Animation)</li></ul></li><li>➤ <u>Project Showcase</u></li></ul>
2	P11S - Young Computer Scientists (Ages 7-9)	80 Hours	2021-09	<ul style="list-style-type: none"><li>➤ Exposes students to a breadth of topics, where they are involved in the application of Coding and Computational Thinking to real-world scenarios, especially in the STEM (Science, Technology, Engineering, Mathematics) field.</li><li>➤ Students can master the art of analyzing complex issues, breaking them down into manageable sub-problems, and crafting ingenious solutions.</li><li>➤ <u>Research areas completed (10 Hours each):</u><ul style="list-style-type: none"><li>○ AR - Augmented Reality</li><li>○ MK - Makey Makey</li><li>○ MBIT - Micro:Bit</li><li>○ MaG - Mathematics (Geometry)</li><li>○ BL - Biology</li><li>○ GM - Game Maker</li><li>○ MM - Movies Magic</li><li>○ BOT - Robotics</li></ul></li></ul>
3	P201+P202 - App Inventor 1 & 2 (Ages 10-12)	20 Hours	2021-12	<ul style="list-style-type: none"><li>➤ <u>Introduction to App Inventor and its Interface</u><ul style="list-style-type: none"><li>○ Learn about the Smartphone and its touch Interface</li><li>○ Load and run mobile Apps</li></ul></li><li>➤ <u>Events-Driven Programming</u><ul style="list-style-type: none"><li>○ Use Variables and Procedures</li></ul></li><li>➤ <u>Graphics and Animation</u><ul style="list-style-type: none"><li>○ Conditional/comparison Operators</li><li>○ Make animations come alive on your mobile phone</li></ul></li><li>➤ <u>Development of own Project</u><ul style="list-style-type: none"><li>○ Pour your knowledge into the cauldron to develop an interactive game</li></ul></li><li>➤ <u>Project Showcase</u></li><li>➤ <u>Quick Review</u><ul style="list-style-type: none"><li>○ Review of App Inventor 2 Interface</li><li>○ Brainstorm time for a complex app creation</li></ul></li><li>➤ <u>Media</u><ul style="list-style-type: none"><li>○ Learn to use various media components</li><li>○ Voice Recognition</li></ul></li><li>➤ <u>Booleans and Conditionals</u><ul style="list-style-type: none"><li>○ If-then...else-then</li><li>○ Logical Operators</li></ul></li><li>➤ <u>Design Thinking</u></li></ul>

				<ul style="list-style-type: none"> <li>○ Introduction to phases of Design Thinking (Observation, Ideation, Rapid Prototyping, User Feedback, Iteration, Implementation)</li> </ul> <p>➤ <u>Hackathon</u></p>
4	P205 + P206 – Python Junior 1+2 (Ages 10-12)	20 Hours	2021-12	<p>➤ <u>Introduction to Python</u></p> <ul style="list-style-type: none"> <li>○ Learn to install, setup and run Python</li> <li>○ Introduction to the various data types (Eg. Strings, Float, Integers)</li> </ul> <p>➤ <u>Various Data Types</u></p> <ul style="list-style-type: none"> <li>○ Learn and apply numerical data and Mathematics operators</li> <li>○ Calculate the area of a Square/Triangle/Circle</li> <li>○ Develop a BMI Calculator</li> <li>○ Learn String (text) data and String manipulation</li> </ul> <p>➤ <u>Making Decisions with Conditional Operators</u></p> <ul style="list-style-type: none"> <li>○ Syntax of if, if-then-else, if and e lif</li> <li>○ Develop your own “Baymax” – Your Personal Healthcare Companion</li> </ul> <p>➤ <u>Logical operators and Truth tables</u></p> <ul style="list-style-type: none"> <li>○ Learning and Applying logical operators (And, Or, Not)</li> <li>○ Develop a Movie-Age Checker</li> </ul> <p>➤ <u>While Loops</u></p> <ul style="list-style-type: none"> <li>○ Using while loops</li> <li>○ Applying while loops to Mathematics (Eg. Prime numbers, Lowest Common Multiple)</li> <li>○ Problem-sum solving with Guess and Check</li> </ul> <p>➤ <u>Using Modules and Libraries</u></p> <ul style="list-style-type: none"> <li>○ Random numbers</li> </ul> <p>➤ <u>Hackathon and Challenges</u></p> <ul style="list-style-type: none"> <li>○ Timed Challenges for students to stretch their abilities</li> </ul>
5	P215 – Advanced Computer Scientists (Ages 10-12)	60 Hours	2022-12	<p>➤ Exposing students to model advanced concepts and apply their coding know-how across complex app development, hardware elements, and syntax-based programming.</p> <p>➤ <u>Research areas completed (10 hours each):</u></p> <ul style="list-style-type: none"> <li>○ AiH3 - Healthy 365 Junior</li> <li>○ PyGD - Python Game Development</li> <li>○ MBAD - Microbit advanced</li> <li>○ MBAS - Microbit with additional sensor</li> <li>○ PyH3 - Python health advisor</li> <li>○ iOS - Develop iOS mobile apps</li> </ul>
6	S112 – Python 2 (Ages 13-18)	10 Hours	2024-03	<p>➤ <u>Lists and Dictionaries</u></p> <ul style="list-style-type: none"> <li>○ Introduction to data structures</li> <li>○ Create and use lists</li> <li>○ Create and Use Dictionaries</li> <li>○ Develop a shopping cart programme</li> </ul> <p>➤ <u>Strings</u></p> <ul style="list-style-type: none"> <li>○ Understand Strings as a list</li> <li>○ Manipulating strings</li> </ul> <p>➤ <u>Object-Oriented Programming (OOP)</u></p> <ul style="list-style-type: none"> <li>○ Introduction to the concept of OOP (Objects and Classes)</li> <li>○ Defining and using classes (OOP)</li> <li>○ Developing a School Database program with OOP</li> </ul> <p>➤ <u>Program Design and Managing Exceptions</u></p> <ul style="list-style-type: none"> <li>○ Applying design thinking</li> <li>○ Making your program more robust</li> </ul>

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				<ul style="list-style-type: none"><li>➤ <u>Challenges</u><ul style="list-style-type: none"><li>○ Hangman Game</li><li>○ Phone Book</li><li>○ Text Analyser</li><li>○ Savings Projection</li><li>○ Actuarial Consultant Challenge</li></ul></li></ul>
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According to our records, Aiden Breva has met all course requirements and has shown great potential in programming.

This course was delivered entirely in English language.