

why Arch and CoTM students study programming and application ?

Part 1

Department of Communication Skills and Technology



why ARCH and CoTM students study programming and application ?

1. It provides controllable **access to management, design, simulation, manufacturing and assembly** endeavors for the AEC industry;



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2. Programming in AEC industry is one of the **major discussion** in the AEC industry and academia;



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3. Programming in AEC industry has opened a large area of **research** for professionals and researchers;



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Examples of Local researchers:

Profile of the researcher:

<https://architecture.mit.edu/student/alpha-yacob-arsano?fbclid=IwAR2E4YW2-mce9UICR7d9WvNLP2SEtN1jm6onvOD2PpludNWDDeef1c-98aCA>

Link to Clima plus:

<https://www.microsoft.com/en-us/p/clima/9nblggh0b1b4?fbclid=IwAR2pb5ngBtQMkkNH4LnulL9A-T6lw-6j8fc1EQgWVwHREuOOEcOXHcEbHP8&activetab=pivot:overviewtab>



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4. Programming in AEC industry has created a large area of **business and career opportunities** for professionals;



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5. Programming in AEC industry has created numerous opportunities for **higher education** for graduates of AEC professionals;



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6. Programming in AEC industry has created for professionals to come up with **relevant principles** that would affect the AEC profession in a significant manner;



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7. Programming in AEC industry has created the possibility to be interconnected on several platforms and directories to share relevant and reusable information among professionals and researchers;



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8. Programming in AEC industry has provided an extensive opportunity to **consume and manipulate data** for projects. Professionals can best **benefit from access to data, skill or ability** to use them;



Furthermore:

- Teaching programming provides tangible benefits in improving the students' logical reasoning and problem solving skills(American Society for Engineering Education,2004).



Challenges:

- Learning programming is like writing in a new and foreign language where every sentence must be absolutely perfect to avoid catastrophic syntax errors(American Society for Engineering Education,2004).

Nevertheless, recent developments in the technology of programming languages and applications made learning programming easy. (open source directories for free applications and hosting)



Solution:

- By providing abundant and immediate feedback, students find programming less frustrating and seemingly arbitrary, which helps motivate them to continue working on their script until an acceptable grade is produced(American Society for Engineering Education,2004).



Solution:

- In order to make the process of programming endeavor easy for student this course is strategized to be delivered step by step from **easy and friendly tasks to complex** ones.



Reading assignment:

Reading assignment of the week:

- Projects related to programming and project management
- Programming, machine learning, neural network, deep learning, data scientist, machine learning engineers..



Thank You !

