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Arthur De Belen

Education

2019–2023 **Candidate for Bachelor of Science in Computer Science and Engineering**, *Massachusetts Institute of Technology*, Cambridge, Massachusetts, U.S.

Relevant coursework:

- Computer Language Engineering (Spring 2022, $6.1100_{[6.035]}$)
- Foundations of Computer Security (Fall 2021, $6.S060$)
- Design and Analysis of Algorithms (Spring 2021, $6.1210_{[6.046]}$)
- Elements of Software Construction (Spring 2021, $6.1020_{[6.031]}$)

Experience

Internships

Jun–Aug 2021 **Flight Software Intern**, *Astranis*, San Francisco, California, U.S.

- Refactored and tested software components for geostationary-orbit spacecraft.
- Worked on rewriting software components to be less blocking, or more asynchronous.
- Wrote convenience methods for working with Google Protobufs.
- Worked with C++14, Catch2, Python, Pyright.

Research

Aug 2017–Aug 2019 **Student Researcher**, *Philippine Science High School - Main Campus*, Quezon City, Philippines

Two year-long high school classes in independent STEM research, resulting in research manuscript.

- Worked with one to two high school students over the course of high school academic year.
- Reviewed related literature, and wrote a research proposal.
- Presented findings to supervisor and other high school students.
- Topics of research:
  - Comparison of lactic acid yield of fermentation of glucose, mango peels, and rice washing by *Lactobacillus acidophilus*.
  - The effects of the incorporation of different concentrations of essential oils on the properties of tapioca starch-pork gelatin films.
- Manuscripts available at http://bit.ly/2ToI99b .

Miscellaneous / Extracurriculars

Fall 2021, Spring 2022 — **Grader**, *MIT*, Cambridge, Massachusetts, U.S. (remote work)
Graded homework for subject 'Design and Analysis of Algorithms' ($6.1210_{[6.046]}$), for between 5 and 10 hours a week.

April, Sep 2020; Aug 2021 — **Next House Campus Preview Weekend (CPW) / Residence Exploration (REX) Chair**, *MIT)*, Cambridge, Massachusetts, U.S. (hybrid in-person/remote
Worked on running weeklong event series oriented towards introducing MIT culture, and specifically residence hall / living group culture to prospective MIT students and first-year MIT students.

- Worked with committee of 5-7 students to run 2 series of 5 informal online events, and 2 series of 4-5 in-person events.
- Managed about a dozen volunteers; events attended by 10-60 students.

Sep - Nov 2021 — **Next Haunt Puzzle Team**, *MIT*, Cambridge, Massachusetts, U.S.
Helped plan and implement puzzles, for annual, student-run escape room/haunted house hybrid. Also helped with facilitating ushering people through escape room/haunted house.

Sep - Dec 2020 — **Tutor**, *MIT Eta Kappa Nu (HKN)*, Cambridge, Massachusetts, U.S. (remote work)
Tutored three MIT students for about three hours a week, for subject 'Mathematics for Computer Science' ($6.1200_{[6.042]}$).

Programming languages


basic knowledge
intermediate knowledge with some project experience


extensive project experience
deepened expert knowledge
expert / specialist

Level	Skill	Years	Comment
■■■□□	Go/Golang	1	*Have written, with 2 classmates, a compiler for a small C-like language, for a college class project. Partial completion of college class in distributed systems.*
■■□□□	C, C++	2	*High school C++ class, internship, and partial completion of college class in operating systems.*
■■□□□	Python	2	*Internship, semester-long Python class in college.*
■□□□□	Java	1	*Semester-long Java class, club projects.*
■□□□□	Rust	0.5	*Self-taught.*
■□□□□	Haskell	0.5	*Self-taught.*

Languages

English — Fluent
Filipino — Conversational

Interests

Piano

Chess, board games, deception games
Swimming
Casual study of programming language theory / programming languages