

# Joshua Mathew

Fast Track – April 2021  
Student of the Month



Tell us about you. Where'd you grow up? What are your hobbies?

I'm from the Bay. I went to Carlmont High School. Nowadays, my hobbies are mostly building stuff and consumption of media. In terms of building stuff, I'm working on projects like building a mechanical keyboard and setting up LEDs in my apartment. Random DIY stuff in general. I used to play the saxophone, but that's dropped off recently after I didn't pick it up much in the dorms.

Has quarantine affected your lifestyle/hobbies?

In a sense it's been good because hobbies that I can do alone like building

projects are still happening fine but things to do with friends are more difficult. I can't say life before and after quarantine are too different. I wouldn't be going out every day even if there wasn't quarantine.

Why did you choose ECE?

I always really liked math. In freshmen year or a summer beforehand, I was bored and didn't know what to do, and there was this thing where I could take classes for free at a local CC. I took math, physics, and Spanish. I really liked my physics class, so it inspired me to do more STEM-type stuff. In high school, I just gravitated towards STEM AP classes. I specifically chose EE because I got into electronics through gaming. I built my own PC to game on and then it spiraled into more tech stuff.



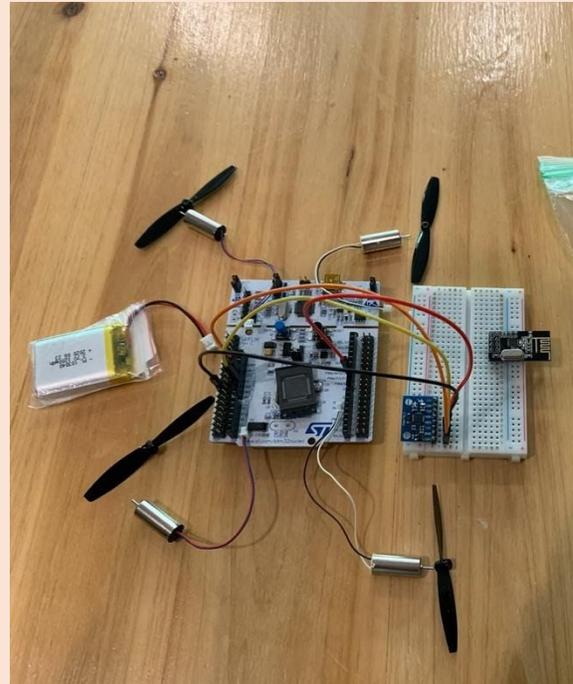
I like math, physics, tech, and thought, engineering must be the move. I also did some robotics and realized this must be for me.

What's your favorite aspect of UCLA or why did you choose to go here?

I picked UCLA because of Fast Track, seemed like a good program. Since I'm from the Bay I wanted to go somewhere far from home but not too far from home. I didn't want to take a 7-hour plane or be 20 minutes driving distance to college. Location, Fast Track, and UCLA being a good school in general were all main reasons. My favorite aspect, at least when quarantine wasn't a thing, was that there were so many things to do in LA and around UCLA.

### What clubs/activities are you involved in at UCLA?

My club experience has been good. I loved OPS in IEEE, and now I'm in Aircropter, and I like that too. I really liked OPS because I liked doing technical projects that I wasn't doing in early lower division classes. OPS definitely satisfied the need to do something hands-on. I think Aircropter's fun because you kind of do everything from the ground up. I haven't got anything to fly yet, but if we get something to fly it'll be really satisfying because we built it all ourselves. I can't say Aircropter is too different virtually compared to in-person because we're essentially working together in a call compared to sitting together at a lab table. The soldering aspect is gone but we get our own parts, so it works well.



Other than IEEE, I also did Club Badminton with my friends. I wasn't good but it's fun playing with other people who are also learning.



### What does Fast Track mean to you or how has it helped in your college experience?

I would say the things that I like are that there are people that I'm basically forced to interact with, not forced, but it's like a circle where I know that we're going to take the same

classes so it's easier to make friends and get to know the people in it. I also think Professor Cabric is a great source for guidance and class advice on what to take next quarter. I also think the summer internship was cool. I mean, we basically got it for free. I think the connection with Fast Track also makes it easier to get to know professors more. It's like an easy entry point to get to know people, whether they're students or professors. For example, for making groups in OPS and Aircropter, I kind of knew fellow Fast Track students so I could ask them to be on my team. Also, in classes I know a small group of people that I can ask for help. I also like how the program requires us to take the Honors classes because if I wasn't encouraged to take them, I wouldn't have taken them but now I appreciate them a lot more. They aren't always necessarily harder, but they add a lot more value to the course content. Most of the time the professor just adds some content and gives harder homework. Taking these Honors classes is not something I would have done without Fast Track.

### How was your summer research experience?

I worked with Professor Diggavi and I was in a group where we researched group testing algorithms which are more mathematical, like what algorithms can we make to test people less but still have a reasonable failure rate. Personally, what I did was I made a web app that would give different results for different algorithms. Now I'm still working

with him but I'm in a different group where we're working on multimodal neural networks (i.e., multiple inputs like accelerometer + LiDAR + audio instead of just accelerometer). One neural network uses the modalities to predict outcomes or one modality from another modality (e.g., thermal from accelerometer). I'll probably stick with him till the end of the year.

In terms of summer, I had a good experience with the Professor and my PhD mentor, but I didn't like the SURP program because it felt like unnecessary added-on work. I liked how we had to make a poster and present it, but I didn't care much for going to the PowerPoint presentation workshops and lectures. I liked the deadlines and poster making because those activities gave me a good example of how real research works where you have to have something to present by a certain time. It gave me a good taste of research life, but I can't say I liked the SURP aspect itself.

### What are your career aspirations/life goals?

My goal right now is just to learn stuff and then hopefully at some point there'll be a topic that I'll be interested in delving into. Knowing myself I'm the type of person to jump from topic to topic so right now I want to get some breadth so that I can dive into whatever I'm interested in in the future. I don't

have a particular area of interest as of yet.

I'll probably not do graduate school until I've had a job for a little while. If I find something that I really know I like, then I'll do graduate school and then I'd surely apply to UCLA. It's not a closed option but I won't do graduate school right after undergrad.