Computer Engineering Club Orientation

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Board of directors

President/Founder - Adi Deshpande

Vice President's/CO-Founders - Nikesh Pandeya, Sanjay Manu

President of Content - Shresht Hunnolli

Board of directors

There are two lower board member positions that are currently open. Board members are elected by their participation and evaluation by the upper board of directors. Lower board of directors are partially responsible for making directed projects and will be allowed say in major decision making going forwards. (Do note that responsibilities can change based on schedules)

In order to apply for a lower board of directors position you must gain the required amount of points that can be gained by doing projects. If you don't complete these required projects then you are unable to apply for a role on the lower board. Applications can be submitted via in person request or messaging one of the upper board managers.

Applications are open at any time as long as you meet the requirements.

General Overview

We will show slides involving myriad computer hardware concepts such as threading, parallelism, oses, gpus, and others, we hope to inspire you to do or learn interesting and innovative projects.

We understand that not everyone understand all the concepts so we compiled an extra learning document, a list of resources including personalized resources, youtube tutorials, articles and other things. The extra learning document and we'll revisit it later.

The main presentation is meant to be a slideshow where we will teach you something that usually changes every week or two. After that we will go into an individual portion in order to handle requests and fix reports in person.

Our goals and your projects

We hope to inspire you to make cool projects regarding anything hardware related. If you think up a project idea on your own we ask that you bring it up to us and let us validate and give feedback on your idea. We also ask that you add it to a github that we made so that others can take inspiration.

Directed projects are on the github and are projects that we made material that makes it easier for you to work through. They are meant to help you build up to a project you do on your own.

If you are not knowledgeable in certain skills then you can look at the extra learning document.

Requirements

Make a github account, fill out the required form (next slide), show up and participate via contributing to your github with projects.

Projects are either chosen by us or you. If you are inexperienced with coding or computer engineering we recommend projects chosen by us that are marked as for beginners or those that have low point totals. Else you fill out an application and, if approved, add your update your folder in the repo where you store your project to our organization in github. Github is a requirement and it is heavily recommended that you take the little time it takes to learn git.

You can ask for assistance with projects at any time via messaging.

Required form

We have a form that we require you to scan so that we can add you to our list of members. Please complete it so that we have an idea of your skills involving computer engineering.

https://docs.google.com/forms/d/1Jpay7EJZEjpqx0ttyP6B_OVtvXSiQR17eILF0VVP2_4/edit?ts=68e71b0d&pli=1

Things related to Computer Engineering

Solid-state physics relates to how looking at things from a small perspective (in our case an atomic one) can be used to make things.

Materials chemistry is the chemistry part of solid-state physics.

Cybersecurity

Computer software

Computers often times take inspiration from biological processes. AI for example, is inspired heavily by neuroscience.

Other forms of engineering.

Computer Engineering and other academic disciplines

Computer engineering dips into other sciences and high level mathematics as well.

Digital signal processing(DSP) is the processing of audio/video waves using Fourier transforms, a wave analysis formula using calculus.

Moore's Law, the theory that processor speed directly correlates with semiconductor physics in quantum mechanics.

Quantum Computing using quantum physics and very very advanced concepts.

Graphics rendering using high level calculus.

Extra Learning document

We made an extra learning document so that people who want to learn skills can independently find a place for easily learn things without having to second guess if they are getting the right information.

For those of you who don't have a github or don't have experience using github/git we have an in depth tutorial for all of yall.

Go to the git tutorial in the extra learning document (Extra learning) and, in the git tutorial, navigate to the Github Club Activity. There you will find a tutorial on how to do everything.