

# APPLICATION FORM –UTSPA EARLY INTERNSHIP INITIATIVE

Internship program name and code: Engineering E101

If you are making application for more than one of the UTSPA early internships, please indicate which others you have applied for by referencing the program type and number and rank your selections in order of preference. *(You may NOT apply for more than three opportunities and you must complete a separate application for each one)*

1. Information and Technology IT101
2. Information and Technology IT100

If your application is not selected but other UTSPA internships still remain available, are you interested in participating in a second round of applications?

Yes

*Please note that you are responsible to provide your own lunch and transportation to GTA locations. You must be available to participate from 9-5, Monday-Friday for each week of the program.*

## Section 1: Basic Information

First Name	Alain
Last Name	Lou
Date of Birth (YYYY/MM/DD)	2000/01/27
Grade	S5

## Section 2: Written Responses

For the following questions, please respond in sentence form in the space provided below.

**Why are you interested in this opportunity? [max. 250 words]**

I'd like to be working in the tech industry in the future. I'll learn a lot from this opportunity in terms of skills related to component design, purchasing, assembly, and other important processes of an engineering firm and it will give me an opportunity to explore what my future career could look like and decide what part of the industry I want to be involved in. The robotics front is particularly interesting to me because it is one of the fastest growing areas of the tech industry, and the systematic process of phasing out more and more human occupations, even creative ones, is a hot topic that is bound to be increasingly relevant in the future.

I also believe that I have the ability to usefully contribute. I have a good background in computer science and experience with robotics (please refer to the 4th question) and I want to be able to use the knowledge that I have in a useful way. This internship provides a great opportunity for me to apply the knowledge that I have and learn from experts to equip me with the capability for projects in the future. I'm excited and really looking forward to it.

**Following the internship, how would you share your experience with your peers in the next academic year? [max. 250 words]**

I'm involved in computer science competitions and the programming club at my school and I could share my experiences there. At programming club meetings I could perhaps share a quick PowerPoint of my experiences and answer some questions. I also have a very close group of friends who are interested in computer science generally and I'd be happy to tell them all about my internship as well as help them debug their projects with some of the new skills I learn. In addition, when I'm working with friends on a computer science project or a side endeavour, I could focus on tackling issues with hardware specifically after I gain experience in the area.

I hope that in the coming school year I'll be able to participate in some hackathons, which means that the skills I learn will be shared with other student developers. In these events, I'll be able to apply some of the new knowledge I'll learn, whether it be through building my project in the hackathon or helping someone else in theirs. I'll be able to both teach and learn from other like-minded individuals while I build my professional network. In any situation where I'd be able to assist a peer, I will. Having new skills allows me to help them out even more.



**What do you hope/expect to gain from this experience? [Max. 250 words]**

I think this internship will provide me a great opportunity to explore my interests and that I'll learn how things are done in the real world. I hope I can learn how a component goes from design to production to installation through all the processes that are involved. Learning how the components themselves work in larger machines also will teach me a lot about systems design, something that is applicable universally in the tech industry. This internship will give me a better understanding of how the industry operates and an idea of what it takes to be a design firm and what a career in the tech industry looks like.

I also hope that this experience will also give me the skill set to fiddle around with things in my spare time.. I enjoy playing with tech (I've almost bricked my computer while installing different Linux distributions and I've built some small gadgets for myself, for example) and I'm excited in seeing what I might be able to accomplish after I learn from professionals who have years of experience in their industry and solve problems on a daily basis. I hope to become a much more learned person after this internship, one who is excited about the possibilities of technologies in the future, and hopefully be part of those developments as I mature as a developer and designer.

**Do you have particular skills or experience that would help to prepare you for this opportunity? Describe where you acquired this experience. [max. 250 words]**

I have some first-hand experience with robotics. Last summer I was able to attend the SHAD summer program at UBC where we programmed Arduino Uno systems as models of "active sculpture" designs. Our group used an ultrasonic radar to detect a person walking through the sculpture and changed the sculpture accordingly to the person's body shape for them to be able to walk through (our sculpture was made from dangling bead chains). Other groups' projects that I was exposed to included a rock-paper-scissors robot, a mechanical tree that responded to humidity and temperature to open its "branches" into an umbrella on hot or rainy days, and a whale that spouted water when its metal body was touched.

I also have experience with programming. This year I got the third highest score in UTS on uWaterloo's Senior Canadian Computing Competition, making the top 50 overall (internationally) on the honour roll. In preparing for the competition, I've learned a lot about algorithm efficiency and different techniques to optimize performance. I've also learned about syntax and structure in programming when collaborating on computer science projects. I try to use the skills that I learn in practical applications and some of those projects are up on my GitHub: <https://github.com/FertileBean>

**Section 3: References**

Provide contact information for a person who can speak to your skills and experience.

Name	Your relationship	Email address	Daytime telephone number
Grant Hutchison	Computer science teacher	grant.hutchison@utsc.hools.ca	(416) 946-7992

#### Section 4: Supplemental Information

Are there any issues affecting your ability to commute to locations within the GTA or accessible by TTC and/or GO Transit for the purposes of the internship? (cost associated with travel to/from various internship locations is not covered; lunch is not covered)

No.

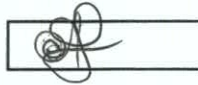
Parental Consent (to be signed by one parent): "I am aware that my child is applying for a legal internship opportunity described in this application and I agree that they have my permission to participate."



If selected to participate, you will be required to sign documents that:

- release the internship sponsor from any liability for bodily injury or material damages that may be incurred in the course of your participation;
- acknowledge your understanding of your legal obligation under privacy legislation and your commitment to safeguard the personal information to which you will be exposed during the internship
- [may add additional health and safety issues they have to comply with etc.]

I declare that the information contained in this submission is true, complete, and may be verified.



**DEADLINE FOR APPLICATIONS:** 5:00 p.m. on Sunday, March 12, 2017. Please scan and submit the form via email to **early intern@bell.net**. Candidates selected will be notified by early April 2017 via email. For those opportunities requiring an interview, candidates will be advised if they will be interviewed by March 30, 2017.

**Thank- you for completing the application form, and good luck!**