Summer Internships for Undergraduate Students 2020

Company	Project
Cadence Design Systems	Developing advanced Specman debugging aids
Mellanox	Redfish controller/analyzer
PTC	DevOps apprentice
PTC	Web developer
Microsoft	Engineering Internship, 795761
Microsoft	Engineering Internship, 795760

Cadence Design Systems

Developing advanced Specman debugging aids

Job Description: Specman is a leading state of the art EDA tool that
provides advanced automated functional verification of hardware designs. It is used
by most of the leading EDA companies. Specman has its own propriety aspect
oriented verification language called *e*.
In this project the student will develop different debugging aids to be used by
customers. The debugging aids might include some or all of the following (generated
automatically out of a user *e* code):
1. Graphical representation of methods' calling graph
2. Graphical representation of complicated temporal expressions
3. **UML** visualizing the user' design

The work itself will include (in a Linux environment):
1. Implementing graphical modules in **Python**
2. Connecting to the Python API of Specman
3. Writing modules in *e* using different Specman APIs like a reflection API

During this project, the student is expected to:
1. Acquire knowledge and experience with **Python graphical libraries**
2. Acquire knowledge of an advanced **aspect-oriented** language
3. Acquire knowledge relating to advanced SW language concepts such as
   parsing and reflection
4. Be exposed to the EDA field
5. Work with experienced senior SW engineers
6. Acquire experience in reading APIs documentation and using them

Note:
*The work can be done by using the existing Specman APIs thus, the work can be
done remotely, no need to have access to Cadence source control.
* The project or number of aids can be extended and be suitable to more than one
student.
This blog describes a similar smaller project we had.

Requirements:

1. Knowledge in Python
2. Passion to challenges and interest in high-level programming languages
   theory.
3. Self-learning abilities

Contact Details: Orit Kirshenberg (okirsh@cadence.com)

Mellanox Technologies

Redfish controller/analyzer

Job Description: Develop GUI & protocol analyzer which illustrates a Redfish schema with its annotated attributes. Reading a Redfish schema files and converting them into GUI based hierarchical representation. The tools shall display the present values which are to be extracted from the queried values and allow the user to request modification of writeable attributes, followed by queries to validate the application of the modified values.

According to the Redfish protocol, the tool shall provide meaningful feedback according to the standard-defined error-codes when a known error-code is reported.

A communication session shall be logged for offline processing, with the ability to "play" a recorded session by reading a previously recorded log file.

Requirements: Learning Redfish protocol & schemas, GUI development, HTTP/HTTPS protocols use.

Contact Details: Yuval Itkin (yuvali@mellanox.com), work phone: +972 (74) 723 7042

PTC

DevOps apprentice

Job Description: Working in a leading IIOT product, you will work on improving the CI/CD pipeline using the latest tools and technologies in the market like: Kubernetes, Cloud, SonarQ, GitLab and Docker and including high code standards and best practices.

Requirements: Students with average above 70, or graduates of Computer Science.

Contact details: Udi Shuchami ushuchami@ptc.com

PTC

Web developer

Job Description: Working in a leading IIOT product, you will work on creating and updating JavaScript components. The components are written in Web Component technology.

Requirements: students with average above 70. 3rd year or graduates of Computer Science. Knowledge in Web Components technology is an advantage.

Contact details: Udi Shuchami ushuchami@ptc.com

Microsoft

Engineering Internship, 795761

Location: Herzliya or Haifa

Job Description: Software engineers at Microsoft are building products, solutions and technologies to empower every person and organization on the planet to achieve more and to make the world a better place. we're looking for engineers to develop new features and components to help make our products more powerful and up-to-speed with the latest challenges. At Microsoft, you will be working with cutting edge technologies and collaborate with top notch people solve. Your efforts on the design, development, and testing of next-generation applications will have an impact on millions of people. As such, we look for people who are passionate about technology and can contribute their skills in many areas. You will learn and grow together with us as our businesses continue to quickly grow and evolve.
We hire versatile people with strong technical passion and skills, high passion for customers and product quality, actively collaborating and learning from others locally and around the world, and who have growth mindset and innovative ideas.
If this sounds like you, Microsoft would like to invite you to come join us as you are, where you can find more than just a job.

Responsibilities: Full stack development, distributed backend services and data pipelines at massive scale, algorithms and data structures, artificial intelligence and machine learning, natural language processing, security, development languages and tools, networking and storage.

Qualifications: Due to nature of the Intern Program we are currently prioritizing applications from students with final graduation date of winter 2022 and beyond.

- Currently pursuing bachelor's, master's, or PhD degree in engineering, computer science or related field with at least 3 semesters remaining to graduation

- A year or two of experience programming in C++, Java or other computer programming languages preferred.
  Ability to demonstrate understanding of algorithms, data structures and other systems architecture factors that affect code quality, performance and customer experience
- Some experience building software outside of the classroom environment like an internship, hackathon, research project or related experience preferred
- Demonstrated skill in time management and completing software projects in a cooperative team environment.

Microsoft is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to age, ancestry, color, family or medical care leave, gender identity or expression, genetic information, marital status, medical condition, national origin, physical or mental disability, political affiliation, protected veteran status, race, religion, sex (including pregnancy), sexual orientation, or any other characteristic protected by applicable laws, regulations and ordinances. We also consider qualified applicants regardless of criminal histories, consistent with legal requirements. If you need assistance and/or a reasonable accommodation due to a disability during the application or the recruiting process, please send a request via the Accommodation request form.

Application Link

Our team will review applications as of March 1st. Last chance to apply is on May 1st

Microsoft

Engineering Internship, 795760

Location: Herzliya, Tel Aviv or Haifa

Job Description: The Microsoft Israel R&D Center, is one of three strategic global development centers situated around the world. Our mission is to lead strategic products and services that realize Microsoft's vision, by tapping into Israel's unique technological & entrepreneurial assets. The center is home to some of the company's most exciting and innovative technologies driven by a collective of rare and diverse individuals.

At Microsoft, nothing is more important than the success of our customers, and the Product teams have been focused on delivering customer success since Day 1. We deeply understand our customers and constantly seek their input on our products and gather their feedback to improve what we do. We rely on data, experimentation, and research to validate our assumptions and design the best product. Our goals is to create market leading products customers love.

As a product manager at Microsoft, you work closely with our engineers, design and research teams to guide products from conception to launch. You connect the technical with the business, working with key stakeholders to rapidly deliver innovative products and next-generation technologies that empower our customers to achieve more.

Join our team if you want to make an impact on Microsoft's newest products and help guide our evolution.

Responsibilities:

- Understand Microsoft's strategic and competitive position and user requirements in depth
- Create strategic product roadmap(s) from conception to launch and collaborate as needed across regions, product areas, and functions

- Drive product development with engineers, designers, researchers etc. on cutting edge technologies

- Define and analyze metrics that ensure the success of products and iterate quickly

Qualifications: Due to nature of the Intern Program we are currently prioritizing applications from students with final graduation date of winter 2022 and beyond.

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- A year or two of experience programming in C++, Java or other computer programming languages preferred.
- Ability to demonstrate understanding of algorithms, data structures and other systems architecture factors that affect code quality, performance and customer experience
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