

**Envest Product Development**

204A St. George Street
Toronto, Ontario, Canada
M5R 2N5

Mechatronics Engineer Co-op (MEC202102)

Type: Full-time Co-op (4 or 8 months)
Start-date: Immediately
Experience: 3rd year or above
Education: Pursuing BSc or BAsC in Mechatronics Engineering or related field

About Envest Product Development

Envest Product Development was founded to assist promising hardware start-ups and established companies with the key challenge of scaling-up production and operations. Our services range include prototyping, design, supply chain development and strategic advice.

Through our deep knowledge base and network of suppliers we regularly collaborate with leading technology startups to conduct manufacturing and operations locally and overseas (mainly Asia). Envest is a dynamic organization that is focused on developing a diverse and engaged team. Located in Downtown Toronto, our office is extremely accessible and ideally placed to collaborate with regional customers. Founded in 2016, Envest has played an important role in assisting our customers through escaping the "valley of death" and sustainably scaling their operations.

About the position

Envest is looking to grow its operations over 2021. We are looking for a versatile candidate to assist with our product development operations. The ideal team member will be driven, passionate and hard working. As we provide services for several hardware companies from a diverse set of industries (IoT, medical devices, renewable energy, etc.) this position requires a candidate with a good grasp of electro-mechanical systems. For the appropriate candidate, this position offers an excellent opportunity for professional development.

Safety is our top priority and due to COVID-19, we are permitting remote work at-least for the near term for this position. Occasional trips to our HQ in Toronto may be needed when working on/with physical prototypes- this will be handled in a case-by-case basis

Requirements:

- Must have completed a minimum 3 out of a 4 years of engineering degree in relevant discipline (Mechatronics Engineering, Mechanical Engineering, etc.)
- Must have a working knowledge of control systems theory and its applications
- Working knowledge of CAD (Solidworks)
- Experience programming firmware for embedded devices (C, C++)
- Must have exposure to physical, ideally mechatronics systems, not just computer-based software development
- Basic knowledge of working and interfacing with various types of sensors to provide feedback for a control system
- Working knowledge of algorithm development to inform software based decisions

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- Exposure to electromechanical systems including motors and drive-trains
- Excellent communication and report writing skills
- Self-Motivated with ability to work independently
- Diligent work ethic

Bonus skills and Experiences

- Experience in generating detailed Mechanical Drawings including GD&T Principles
- Experience with hardware technology startups
- Past consulting experience
- Industrial Design Experience
- Circuit design

Application Requirements:

Please submit resume, cover letter and questionnaire as a single PDF document with the naming format "PJE202109_Firstname_Lastname". Feel free to include any relevant projects/portfolio. Please email your applications to careers@envest.ca.

Questionnaire:

Please answer the following questions to the best of your abilities and attach with your application. Keep your answers brief and concise:

1. What is a planetary gear system? In what scenario is it advantageous over a spur gear system?
2. The specification for the ID of a hole 10mm +/- 0.05mm. Please specify the OD of a shaft with tolerances for a transition fit.