POSITION DESCRIPTION FORM (PDF)

Part-time Support Staff

Instructions for Completing the PDF:

- This 'smart' form template is to be completed & submitted electronically to the HR Consultant.

- Complete each section as accurately and ***succinctly*** as you can in the space provided. If you have questions, contact your respective HR Consultant for assistance.

  Depending on the duration of the work assignment, you will be required to complete the Cover Page and Part 1 only **or** Parts 1 & 2 **or** Parts 1, 2 and 3.

CPT Tier I - Cover Page and Part 1 only

- Casual part-time support staff work that is temporary/transitory only and will not exceed a duration of one academic semester (4 months). For temporary assignments within this category which are recurring year-over-year within specific business cycles (e.g. start-up), please follow the directions below for Tier II.

CPT Tier II - Cover Page and Parts 1 & 2 only

- Casual part-time support staff work that is term certain but that will be for a duration of more than one academic semester up to four academic semesters (more than 4 months up to 16 months).

RPT only - Cover Page and Parts 1, 2 & 3

- Regular part-time (RPT) support staff work that is required as part of ongoing operational needs and is considered to be long-term/permanent in nature.

POSITION DESCRIPTION FORM (PDF)

Regular Part-time Support Staff

Position Title: Research Associate – Firmware Development

Position Number: PT0284 Pay Band: 10

Reports To: Fereydoon Diba, Director & Principal Researcher, CAMIIT

Appointment Type: 12 Months **"Other" Hours Details:** Click here to enter text.

Scheduled Weekly Hours (maximum 24 hours per week): 20

PDF Completed By (Manager Name): Fereydoon Diba

Effective Date: December 18, 2025 Last Revision: Click here to enter text.

SIGNATURES

Incumbent: _____ Date: _____

(indicates incumbent has read and understood the Position Description Form details)

Supervisor: _____ Date: _____

(indicates the supervisor has authorized and assigned the duties & responsibilities in the PDF)

PART ONE:

POSITION SUMMARY

The Research Associate – Firmware Development supports and conducts applied research activities at the Centre for Applied Machine Intelligence and Integration Technologies (CAMIIT) including literature reviews, assisting with microcontroller programming, machine learning algorithm development, feasibility assessments, and preparing technical documentation. The role also attends research meetings, training sessions, and workshops, and works collaboratively with CAMIIT staff, including Principal Researchers, Research Technologists, Research Engineers, and Research Assistants, to contribute to project outcomes under the direction of senior research staff.

KEY DUTIES & RESPONSIBILITIES

Indicate as clearly as possible the significant duties and responsibilities associated with the position. Indicate the approximate percentage of time for each duty. Keep sentences short, simple and to the point. *TIP: Describe major clusters of functional work rather than detailed individual work routines and procedures.* Do not use allocations of less than 5%.

	Summary Details	Percentage %
1	Applied Research Support & Contribution • Conduct applied research activities under the guidance of the Principal Researcher, including supporting experimental design, programming, implementation of research activities (e.g., experimental setup), and data analysis. • Contribute to field-based and/or laboratory research activities as required; assist with microcontroller programming, algorithm training; support the development and testing of models or tools; and help prepare project documentation. • Assist with the preparation of research outputs such as technical reports, newsletters, annual reports, and other project-related publications, with opportunities to contribute to publications as appropriate. • Support presentations of research activities and findings at meetings, workshops, training sessions, seminars, or other forums, as directed.	60%
2	**Partner & Stakeholder Support** • Support communication with research partners by assisting with meeting preparation, documentation, and follow-up activities under the direction of senior research staff. • Participate in partner meetings as required to support information sharing, note-taking, and coordination of agreed-upon actions. • Assist in preparing summaries, presentations, and materials to help communicate research progress and findings to partners in a clear and accessible manner. • Support the incorporation of partner feedback into research activities by assisting with updates to documentation, data collection, or analysis tasks, as directed.	15%

	Summary Details	Percentage %
3	**Project & Team Support** • Support funded research projects by assisting with task tracking, documentation, and coordination activities to help meet project timelines and objectives. • Work collaboratively with CAMIIT research staff and students by contributing technical and research support as assigned. • Provide day-to-day research support to the project team by assisting with data management, troubleshooting routine issues, and escalating complex matters to senior staff as needed.	20%
4	Other Duties As Assigned *(do not amend this section)*	5%

To calculate the relative percentage of time allocated to each cluster of key duties & responsibilities, remember to consider the total amount of hours this part-time position will normally work in a year.

For example:
An RPT position which normally works 24 hours per week for 10 months of the year would have approximately 960 annual hours (24 hrs/wk x 4 wks/month x 10 months). If this position is estimated to spend 5 hours per week completing a cluster of work associated with organizing and maintaining business files, you would allocate 20% to this function calculated as (5 hrs/wk x 4 wks/month x 10 months) divided by 960.

PART TWO:

TRAINING & TECHNICAL SKILLS

Indicate the minimum level of independent studies, formal education, internal and/or external training programs including professional and technical or apprenticeship courses necessary to fulfill the requirements of this position.

Formal Education Requirements:
Completion of a four (4) year university degree or more.

Field(s) of Study:
Electrical Engineering, Mechatronics

Other Vocational Certifications and/or Apprenticeships:
Click here to enter text.

EXPERIENCE

Specify the minimum number of months and/or years of practical experience in any related work necessary to fulfill the requirements of this position.

Practical Work Experience:
More than five years up to eight years.

Additional Skills & Abilities:
Familiarity with the development of electromechanical products.
Experienced in working with mechatronics systems (servo motor, microcontroller, industrial sensors, industrial communication and electrical wiring).
Intermediate skills in programming and troubleshooting of microcontrollers and embedded control systems.
Good communication, interpersonal and collaborative relationship-building skills. Good analytical and problem-solving skills.
Must be able to maintain confidentiality and always demonstrate tact and diplomacy. Ability to understand technical concepts.
Ability to work independently and as a team player within a fast-paced business environment.
Ability to work featuring critical deadlines, multiple projects and competing priorities

PART THREE:

COMPLEXITY

Describe the amount and **nature of analysis**, **problem-solving** and **reasoning** required to perform the core duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position. Answer the questions listed below in the Key Considerations section.

Example #1

Developing and testing embedded software and algorithms
Under the supervision of the Principal Researcher, the Research Associate performs analysis and problem-solving to define microcontroller program architectures and algorithms. This work requires understanding technical specifications, interpreting project requirements, and applying structured reasoning to modify code or parameters. Problems are typically well-defined by the Principal Researcher, though solutions may require multiple iterations and testing cycles to achieve acceptable performance.

Example #2

Integrating technical components within a research project
The Research Associate analyzes how assigned technical components interact within the broader research project, including integrating embedded software with machine learning models and addressing system constraints. The role involves identifying sources of error or inefficiency and following established troubleshooting approaches. More complex or novel challenges are referred to the senior research staff for guidance and resolution.

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

Is the work considered to be routine/non-routine?
Non-routine.

How would you describe the complexity of the work?
Some duties are varied and complex.

Describe the business processes used by the position.
Processes are specialized.

JUDGMENT

Describe the degree of independent judgment and problem-solving required to perform the duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position. Answer the questions listed below in the Key Considerations section.

Example #1

Technical problem-solving during development and testing
The Research Associate applies independent judgment to troubleshoot coding issues and help refine algorithms during development and testing. Judgment is used to identify likely causes of technical issues and determine when problems can be resolved independently versus when escalation or consultation with senior research staff is required.

Example #2

Applying research methods and tools within defined parameters
The Research Associate exercises judgment in applying established research methods, programming frameworks, and development tools to assigned tasks. Decisions involve identifying the appropriate coding techniques, libraries, or model configurations within defined project guidelines. In contrast, more complex design choices, methodological changes, or deviations from project scope are reviewed and approved by the Principal Researcher.

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

The work duties typically require:
Development of new techniques or new information from existing data.

In determining a solution for problems, the incumbent has discretion to:
Modify/refine existing methods and options.

MOTOR SKILLS

Describe the aspects of the position that require fine motor movements (delicate, intricate or precise) related to the core duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position Answer the questions listed below in the Key Considerations section.

Example #1

Incumbent work in an office setting working at a desk, mostly programming
Computer and desk work

Example #2

Task / Activity
Description

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

When considering 'speed' of fine motor movements for this position:
Speed is not a consideration.

Indicate the percentage of time that is required in performing each of the tasks discussed above.

Task	% of Time
Working at a desk,	75%
Working in the lab	25%

PHYSICAL DEMAND

Describe the degree of **physical demand** required to perform the duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position that illustrate the type and duration of physical effort, the frequency, the strain from rapid and repetitive fine muscle movements or the use of larger muscle groups, lack of flexibility of movement, etc.

Example #1

Incumbent works in an office, sitting at a desk,
Computer and desk work

Example #2

Able to work in an electronics lab
Carrying small loads, such as electronic boards, cables or measuring devices Follow health and safety protocols within the lab

Indicate the percentage of time that is required in performing each of the tasks discussed above.

Task	% of Time
Working at a desk,	75%
Working in the lab	25%

SENSORY DEMAND

Describe the degree of **sensory demand** required to perform the duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position that illustrate the level/degree of concentration (visual, auditory, tactile, etc.). Answer the questions listed below in the Key Considerations section.

Example #1

Data compilation, analysis and planning
Data compilation, analysis. Reports are in various formats depending on the nature of the project with information being submitted from various sources requires significant concentration to ensure all details are captured correctly. This occurs daily.

Example #2

Task / Activity
Description

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

How would you describe the requirement for attention to detail in this position?
Frequent/Regular

How would you describe the requirement for sensory demand in this position?
(Considerable, Moderate or Extensive) Moderate

Indicate the percentage of time that is required in performing each of the tasks discussed above.

Task	% of Time
Programming, analysis and updating on computer and in meetings	100%

STRAIN FROM WORK PRESSURES / DEMANDS / DEADLINES

Describe the degree of **work pressures** involved in performing the duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position that illustrate the deadlines, interruptions, distractions, multiple or conflicting demands/workloads and dealing with people in difficult situations. Answer the questions listed below in the Key Considerations section.

Example #1

Conducting applied research and analysis for funded projects
The Research Associate experiences moderate work strain due to the need to support time-sensitive technical tasks within funded project timelines, including assisting with microcontroller programming and machine learning algorithm development. Work pressures may increase when development milestones, testing cycles, or technical deliverables are approaching, requiring sustained concentration, problem-solving, and attention to detail. The role involves managing interruptions, responding to feedback from senior research staff, and adapting to changing technical requirements while maintaining code quality, documentation, and collaboration within the research team.

Example #2

Task / Activity
Description

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

How would you describe the workflow demands this position typically faces?
Deadlines are tight OR may periodically change or conflict.

How would you describe the existence of critical deadlines in this role?
Occasional critical deadlines.

How would you describe the level of interruptions this position faces?
Interruptions occur regularly but tend to be predictable.

Indicate the predictability of the strain and percentage of time required in each task discussed above.

Task	% of Time	Predictability*
Planning, analysis and organizing	100%	UP (Usually Predictable)
		Choose an item.

INDEPENDENT ACTION

Describe the degree of **independent action** and **autonomy** required to perform the core duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position. Answer the questions listed below in the Key Considerations section.

Example #1

Implementing assigned technical research tasks
The Research Associate independently completes assigned technical tasks such as microcontroller programming and contributes to machine learning algorithm development based on defined project requirements and guidance from the Principal Researcher or senior research staff. The role involves exercising judgment in selecting appropriate tools, coding approaches, and troubleshooting methods within established frameworks, while seeking direction for complex issues or changes in scope.

Example #2

Task / Activity
Description

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

What type of instruction is typically given to the incumbent?
Uses procedures and past practices but may adapt them, as required.

What degree of supervision is typically provided to the incumbent?
Periodic supervision; occasional supervisory input.

How is the work typically checked and verified?
Output is reviewed by report/discussion.

How frequently is the work checked?
Most processes are reviewed monthly.

Describe duties which are the incumbent's responsibility where independent action requires initiative and/or creativity and indicate how often the duties occur. Identify the typical situations or problems that are normally referred to the Manager for solution.

COMMUNICATIONS / CONTACTS

Describe the nature of contact and purpose involved in communicating information (i.e. to provide advice, explanation, to negotiate, or influence others to reach agreement, etc.), and the confidentiality of the information provided. Answer the questions listed below in the Key Considerations section.

Nature of Contact (Who)	Purpose of Contact (What)	Frequency
Exchanging routine information, extending common courtesy	Administration, project partners and internal departments requesting information pertaining to programs or projects	Daily
Explanation and interpretation of information or ideas	Explain project requirements to members of project team and other stakeholders	Weekly
Imparting technical information and advice	Attendance and presentation at various meetings to impart information and advice on financial matters and project status	Weekly
		Choose an item.
		Choose an item.
		Choose an item.

Key Considerations:
With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

Communications in this position are typically engaged for the purpose of:
Providing guidance/technical advice of a specialized nature; seeks to secure cooperation of others.

What type of involvement does this position have with confidential information?
Occasionally involvement with minor disclosure implications.

RESPONSIBILITY FOR DECISIONS AND ACTIONS

Describe the type of **responsibility** that exists for the **decisions** and **actions** related to the core duties of the position. Provide up to two (2) examples in the space provided below of regular duties for this position. Answer the questions listed below in the Key Considerations section.

Example #1

Planning, analysis and coordination
Although regular weekly meetings with the supervisor occur, the planning nature of the work is not always transparent, and a high degree of confidence is placed in the incumbent to complete their work at a high level and to raise issues as they occur. As such, some issues may not be exposed until a major marketing event or promotion is carried out, which can lead to reputational risk.

Example #2

Task / Activity
Description

Key Considerations:

With respect to the examples above and the regular duties associated with this position's core functions, please answer the following questions:

How errors are typically detected for work completed by this position?
Errors detected after-the-fact.

What is the typical scope of impact to the organization for errors in this position?
Results in significant waste and negative impacts to operational effectiveness.

WORK ENVIRONMENT

Describe the physical environment that the incumbent works in. Consideration should be given to:

- The probability or likelihood of exposure to disagreeable/hazardous elements.
- The nature of the disagreeable/hazardous element
- Length of exposure while on the job
- Travel

Complete the chart below. Answer the questions in the Key Considerations section.

Environment	% of Time
Professional office environment Yes	100%
Outdoor work; seasonal conditions No	
Other (please specify)	
Other (please specify)	

Key Considerations:

With respect to the nature of disagreeable/hazardous elements this position is in contact with, would you describe them as:
Slightly disagreeable

With regard to the disagreeable/hazardous elements referenced above, how often does the position encounter them?
Occasional

If this position is required to engage in business related travel, what is the frequency of the travel?
Occasional (10%-30% of their time in transit)

SUPPLEMENTAL DATA

Provide any additional information which will serve to further enhance understanding of the position.
Click here to enter text.