**Critical Work Functions and Key Tasks / Performance Expectations**

**Implement embedded systems engineering strategy**
- Contribute to the development of functional engineering strategy
- Lead strategic technology initiatives relating to reducing time to market and improving quality of product delivery
- Align embedded systems architecture priorities with longer term roadmaps for the technology landscape
- Drive common cross-functional understanding of systems requirements

**Identify requirements**
- Determine user requirements based on business needs
- Identify alternatives where multiple solutions to requirements exist
- Prepare budgets, bids, or contracts for projects
- Oversee the preparation of design specifications
- Approve project design changes
- Recommend solutions to technical challenges
- Prepare project and other relevant documentation

**Develop embedded systems software**
- Provide subject matter expertise throughout the product development cycle
- Oversee the production of fully tested, qualified and documented product design
- Guide the design, development and verification of software for embedded systems
- Participate in design and security architecture reviews
- Provide guidance in issue resolution
- Develop project status reports
- Oversee the documentation of all requirements, specifications and preparation of reports for each project
- Set the direction for best design practices for development and testing
- Review embedded systems performance to identify improvement opportunities
- Guide the development of new processes and tools to ensure continuous improvement
- Lead the development of technical guides for internal and external users
- Provide guidelines in issue resolution

**Optimize embedded systems**
- Review embedded systems performance to identify improvement opportunities
- Guide the development of new processes and tools to ensure continuous improvement
- Lead the development of technical guides for internal and external users
- Establish best practices and quality standards

**Integrate software and hardware**
- Oversee integration of embedded systems with devices
- Guide end-to-end system integration, systems debugging and testing
- Provide guidance on hardware design and the development of prototypes
- Approve improvements to existing integration processes

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**Technical Skills & Competencies**

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<th>Skills &amp; Competencies</th>
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**Generic Skills & Competencies (Top 5)**

- Leadership
- Design Thinking Skills
- Communication
- Problem Solving
- Decision Making

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**Programme Listings**

For a list of Training Programmes available for the Infocomm Technology sector, please visit: [www.skillsfuture.sg/skills-framework/ict](http://www.skillsfuture.sg/skills-framework/ict)

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