

To Apply for This Position:

Create an email with subject title "Embedded Software Engineer DSP", email a copy of your resume to jessica@princetechnology.com

Location Address: ALLEN PARK, MI,48101

Position Description:

Embedded Software Engineer - DSP technologies This position is responsible for the development and integration of DSP audio processing subsystems within Ford's SYNC infotainment system. This includes performing tasks throughout the entire software development life cycle – planning, requirements elicitation, design, implementation, integration, and defect resolution. The successful candidate will work within a multidisciplinary software development team alongside experts in DSP algorithm development, audio systems engineering, vehicle acoustics and tuning.

Skills Required:

- Develop, integrate, and support DSP audio frameworks, algorithms, and software components
- Design and implement software components to manage DSP subsystem command/control, tuning, and audio I/O routing
- Work with teams at Ford and technology partners to define control APIs and integration points between DSP and application processor subsystems
- Participate in root cause analysis of hardware quality problems and software defects
- Participate in system design, documentation, and testing to deliver a best-in-class infotainment system

Experience Required:

- 3+ years of embedded software development experience in C/C++ for mobile or consumer electronics products
- 3+ Experience in real-time systems, audio and acoustics principles

Experience Preferred:

- Experience with C/C++ software development, profiling, and debugging for embedded DSP systems, including exposure to DSP instruction set architectures (ISA) and optimization techniques
- Familiarity with GNU toolchain, and Unix: QNX, Linux, or equivalent POSIX-compliant operating systems
- Experience with general-purpose microcontrollers and application processors such as ARM Cortex-A or Cortex-M, and real-time OS concepts such as scheduling, memory management, and synchronization
- Experience with OS drivers and kernel-level software supporting DSP subsystem management, audio I/O, and interprocessor communication
- Familiarity with standards for digital audio peripheral control, I/O interfaces, and buses including I2C, I2S, and A2B
- Familiarity with automotive ECU development, in-vehicle signaling and communication mechanisms such as CAN
- Proficiency with revision control including: git, subversion, or equivalent
- Experience with the development, implementation, and tuning of basic signal processing algorithms for vehicle acoustic processing and tuning, including: volume control, loudness, equalization, balance/fade, delay, upmixing and surround sound, limiters, and source mixing
- Familiarity with concepts and control of advanced vehicle acoustic processing algorithms including handsfree (HF), active noise control (ANC) and engine sound enhancement/synthesis (ESE/ESS)
- Experience working in multi-site software development teams

Education Required:

- Bachelor's degree in Computer Engineering, Electrical Engineering, Computer Science, or equivalent

Education Preferred:

- Master's degree in Computer Engineering, Electrical Engineering, Computer Science, or equivalent

Additional Information:

Web Based Assessment not required for this position. Visa Sponsorship and Domestic Relocation is available for this position. Travel cost for an in person interview may be covered. Salary Range 6-8 \$61,100 - \$134,880 Position Location: Fairlane Business Park II Requisition: 30243BR