



# Evolution Robotics

## Employment Opportunity Profile

130 West Union Avenue • Pasadena • California 91103 • (626) 535-2825

### **Embedded Software Engineer**

Evolution Robotics  
Pasadena, California

Position Summary as of March 3, 2008

**Title: Embedded Software Engineer**

**Reports to: VP of Engineering**

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#### **The Company:**

Evolution Robotics, Inc. is a robotics company that is developing break-through technologies that are revolutionizing robotics for the mass market. The recent convergence of low-cost mobile computing, wireless communication, and sensing technologies has not only made the development of mobile robotic products possible, but also economical for mainstream usage. Evolution Robotics develops breakthrough solutions for making machines sense and act autonomously. We partner with consumer electronic companies to augment the capabilities of their products, such as the Sony AIBO(r) dog or the WowWee robotic toys, or create entire new robotic products such as the eVac robotic vacuum cleaner from Sharper Image.

Evolution is a recognized leader in the industry and the academic communities. The company has assembled a world-class management team composed of leading robotics experts and consumer products business leaders to make the company's vision of providing useful robots at affordable prices a reality.

The Evolution Robotics team operates in a highly dynamic and very collaborative environment where the flow of ideas is encouraged from all parts of the team. The team of extremely talented engineers and scientists at Evolution has created a unique and highly stimulating and fun work environment. This team challenges the status quo in technology and pushes the envelope on what may seem impossible.

Evolution Robotics is an operating company of Idealab!, a technology incubator known for having started many successful companies like Overture and CitySearch. We are located in the beautiful and sunny Pasadena, in Southern

California. Hosting scientific institutions like the California Institute of Technology and the Jet Propulsion Lab, and national events like the annual Tournament of Roses, the city is considered the main cultural center of the San Gabriel Valley.

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**Position Purpose:**

Design, implement, test, and document robotics and vision algorithms in C/C++ on Linux/Windows and on embedded platforms.

Work within a unique team of world-class experts in robotics, artificial intelligence, computer vision, and autonomous navigation.

Participate in the overall system design of the embedded robotic components.

The position involves a substantial portion of "hands-on" work and requires an individual able to work independently with minimal supervision.

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**Requirements:**

- Minimum of 5 years experience in C/C++ Software Development.
- Minimum of 3 years experience in C/C++ Software Development for embedded systems and/or low level (or kernel level) drivers for Windows or Linux OS.
- Familiar with a wide variety of DSP processors and microcontrollers.
- Experience writing software for devices with strict real-time requirements.
- Experience designing low-level drivers and/or software for embedded systems.
- Good knowledge of OOA, OOD, OOP. Experience writing reusable code.
- Strong problem solving skills and a fast learner. Strong analytical skills.
- Hands-on design and development experience.
- **Minimum Degree:** BS in Computer Science, Math, Physics, Engineering or equivalent.

**Nice to have:**

- Experience working in teams developing embedded products for the consumer market sector.
- Experience programming Embedded Operating Systems such as Lynx, VxWorks, or QNX.
- Assembly programming.
- Image processing experience including image sensors and image acquisition familiarity.
- Familiarity with SVN or equivalent configuration management tool.
- Scientific programming experience.
- Familiarity with XML, Perl, Shell scripts.
- Understanding of and experience with any of the following: behavior-based control, navigation, path-planning, obstacle avoidance, computer vision, fuzzy logic, estimation and control.
- Commercial SDK development experience.

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**INTERESTED CANDIDATES SHOULD SUBMIT THEIR RESUME AND SALARY HISTORY TO: [careers@evolution.com](mailto:careers@evolution.com)**