Recruiting

*Interested in Bay Area. US Work Status: Authorized
May not be quite right, but was interested in hearing about openings.

═══
═══════════════════
████████████████████ @
████████████████████████
Ph: ████████

Software Engineer/C++ Programmer-3 years experience

                 ████████████████
         █████████████████████████████
         Phone : ███ █ ███████
       Email : ███████████ @ ████████

OBJECTIVE :

A challenging position in C++/Object Oriented Software Development.

EXPERIENCE :

January 1997 to present : Software Engineer,
                      Engineering Animation Inc, (Detroit office)
Southfield, MI.

* Member of Software Product Development team, developing in C++ mainly on
Unix platforms at present.

   * Developed new features in the Measurement, and, Attribute Filtering,
     modules of VisMockUp(TM) (a large model 3D rendering/digital
     prototyping software product). Added new menu items to product GUI
     (X/Motif), modified existing C++ classes, implemented new C++ classes,
     designed and implemented new algorithims.
   * Major involvement in the design, architecture and coding of an Object
     Oriented API for data (hierarchy, geometry, attributes) translation
     from CAD systems and other formats into EAI internal/DirectModel(TM)
     format. Use of C++ class inheritance (derived classes), abstract base
     class, polymorphism, reference-counted objects, class factory,
     data-less interface classes, wrapper classes, process manager classes,
     hash table, etc.
   * Developed a C based first version of the above API within one week.

                      Page 1

WEB

* A principal developer of the new MasterClient(TM), a C++ application
  for IDEAS(TM) to EAI data translatoion.
* Owner of the software (C++ app) for converting EAI data to the
  ROBFACE(TM) format.
* Major contribution in developing an application for translating
  CATIA(TM) Free Form Design Data to EAI internal/DirectModel(TM) format.

July 1996 to August 1996 : Intern, Scientific Research Laboratories (SRL)
                           Ford Motor Company, Dearborn, MI.

* Worked with the Interactive Conceptual Design and Applications (ICDA) team
in the area of Geometric Modeling research.

* Developed an algorthim to handle the applications of the geometric
  Direct Surface Manipulation (DSM) technique across individual patch and
  composite surface boundaries. Incorporated this algorithm into PDSM, a
  proprietary research software written in C, OpenGL and X/Motif.
* Updated the 3D Painting feature in PDSM.
* Documented the entire technique of the construction and application of
  geometric DSM features in a research report.

May 1995 to December 1996 : Graduate Research Assistant
                            Virtual Reality Lab (VRL)
                            University of Michigan, Ann Arbor, MI.

* Virtual Reality Research involved visualization of dynamic Finite Element
Analysis (FEA) of Automotive Tires. Sponsor : Automotive Research Center
(ARC).

* Wrote a software in Perl and C to extract geometry from the output of
  FEA software Abaqus and convert it into the VRML format.
* Polygon meshes were used to model geometry. Connectivity of vertices
  generated independent of FEA model.
* Added features like textures, lighting, material and environment for
  viewing.

* Research in Geometric Modeling and 3D Graphics involved the development of
new algorithms for real-time painting of designs or patterns on free-form
(3D) parametric surfaces (like NURBS surfaces). Sponsor : Ford Motor
Company.

* Algorithms based on mapping design curves through surface evaluator and
  surface-to-surface intersection techniques using contouring algorithm
  were implemented and found to be unuseful for real-time applications.
* New technique based on "Grapefruit" model was developed for real-time
  applications.
* Developed a 3D viewer to implement and test the algorithms on SGI
  platforms. The source was written in C, the 3D graphics interface in
  SGI GL and the user interface in X/Motif.
* Incorporated the new technique in PDSM, a CAD research software at SRL,
  Ford Motor Company.
* Documented the project in a research report.

August 1994 to April 1995 : Graduate Research Assistant, Engineering Mechanics
                            Iowa State University, Ames, IA.

January 1994 to May 1994 : Structural Engg Research, Naval Architecture
                           Indian Institute of Technology, Kharagpur, India.

May 1993 to June 1993 : Intern, Mazagon Dock Limited, Bombay, India.

Page 2

Recruiting

Software Development Skills :

Experienced and familiar with :

* Developing products, libraries, and APIs.
* Software control and development tools.
* Object Oriented Programming, GUI programming, 3D Graphics programming, CAD programming, Scene Graphs, Real-time systems.
* Programming Languages : C++, C, Java, Fortran, HTML, Basic.
* Graphics Languages/Libraries : DirectModel, Open/GL, Open Inventor, VRML, X/Motif.
* Platforms : SGI, HP, Sun, IBM, DEC, PC, Macintosh.
* Operating Systems : Unix (Irix, HP-UX, Ultrix), Windows, DOS, Macintosh.
* Working in aggressive, highly dynamic work environments and schedules.
* Meeting deadlines at short notice.
* Teamwork, helping tech-support staff in customer queries and requests.

Publications :

* "Algorithms for 3D Painting on Free Form Surfaces", report to submitted to Ford Motor Company, December 1996.

* "Projective re-parametrization of surface patches for formation of cross-boundary geometric features" (with Y Chen and P J Stewart), Manufacturing Systems Department, SRL, Ford Motor Company, August 1996.

* "A Dynamic Model to Interpret and Predict Measured Power Line Support Forces", (with K G McConnell), in the Thirty-Second Annual Power Affiliate Report, EPRC, ISU-ERI-Ames, May 1995.

* "3D Finite Element Analysis of Ship Structure using a software", (with M Mukhopadhyay et al). Final Report to the Ministry of Shipping and Transport, Govt of India, July 1994.

EDUCATION :

MSE, Naval Architecture and Marine Engineering, December 1996
University of Michigan, Ann Arbor, MI.
Areas of Specialization : 3d Graphics, Geometric Modeling, Virtual Reality.
Advisor : Professor Klaus-Peter Beier

B Tech (Honors), Naval Architecture, July 1994
Indian Institute of Technology, Kharagpur, India.

Related Coursework And Projects:

* Data Structures in C++
* Interactive Computer Graphics
* Principles of Virtual Reality
* Surface Modeling
* Computer Aided Design Methods
* Computer Aided Design and Production
* Developed a computer game "TANGOES" (to construct a shape using given geometric objects) with a GUI in X/Motif.
* Developed a program using OpenGL and X/Motif to interactively create and edit NURBS curves and surfaces.

Honors and Awards :

* Graduate Assistantships and Tuition Waivers from University of
  Michigan, Iowa State University, Virginia Tech, Memorial Univ of
  Newfoundland (Cananda) and acceptance into graduate program at MIT.
* Premium for Academic Excellence (PACE) Award from Iowa State University
  for 1994-95.
* Highest GPA in major area of Bachelor's degree.
* Ranked among top 2% in IIT Joint Entrance Exam 1990 (India's top
  entrance exam into Engg School).

Activites :

* May 1996 to August 1996 : Social and Education Chair, Renaissance
  Co-operative, Ann Arbor, MI.
* September 1995 to September 1996 : Treasurer, Indian Students
  Association, University of Michigan, Ann Arbor, MI.
* July 1995 to August 1995 : Graduate Mentor for High School Students,
  University of Michigan, Ann Arbor, MI.
* April 1993 to April 1994 : Treasurer, Naval Architecture and Ocean
  Engineering Society, IIT Kharagpur.
* April 1992 to April 1993 : Undergraduate Class Representative.
* April 1991 to April 1992 : Hall Council Member, Patel Hall of
  Residence, IIT Kharagpur.

References : Available on request.

Availibility : Open

---- **End of Message** ----