

### **OBJECTIVE:**

A Mechanical Engineer seeking a position providing the opportunity for continued career growth in cutting-edge technology with an eye towards product development. Supporting a positive team environment that encourages new ideas, communication, and self-improvement is a must. I feel my experience in mechanical engineering, systems engineering, advanced technology, customer support, and project management combined with a broad understanding of manufacturing and business processes will allow me to develop unique solutions to a breadth of engineering problems.

### **EDUCATION:**

University of California at San Diego: BS Mechanical Engineering, Emphasis in Economics

Graduated Spring 1999

California Polytechnic University, Pomona: MBA, Emphasis in Finance, Honor Roll

Graduated Fall 2004

Thesis Topic: "A Feasibility Study for a Custom Motorcycle Company"

### **WORK EXPERIENCE:**

#### **June 2005 - Present**

Consulting via WolfKatz Engineering LLC ([www.wolfkatz.com](http://www.wolfkatz.com)):

Formed WolfKatz Engineering LLC as an outlet for my creative energy in the Winter of 2003. I am currently working as an Engineering Consultant via WolfKatz doing project management, systems engineering, and mechanical design engineering. Clients include K+N Engineering, Caltech (The California Institute of Technology), and BSST (Bell Solid State Thermoelectric). Projects have ranged from race car preparation, to the complete mechanical design of a research grade digital camera, to the systems level integration and packaging of a prototype thermoelectric heating a cooling device for the automotive market. Activities have included Solidworks design, MS project scheduling, creating of systems diagrams, physical modification to various vehicles, overseeing production of various in house designs at various outside machine shops, and working with large companies (specifically Visteon) to encourage good communication and quick development schedules. Work with all clients is on-going at various levels.

#### **2001 – June 2005**

California Institute of Technology (Caltech), GALCIT – Research Engineer in the Graduate Aerospace Labs at Caltech. Work includes mechanical design, systems engineering, facilities management, proposal preparation, technical sourcing and stand-alone research. Mechanical design activities include new test section design for the GALCIT Super Sonic Shear Layer, camera body design for the GALCIT HIT (Hybrid Imaging Technology) Camera, Compete Test Section and Control System Re-design for the GALCIT 17" Shock Tube Facility, and various other projects (example drawings available on request). My responsibilities include integrating new experimental ideas into existing mechanical and electronic systems including data systems, optical system design, and basic electro-mechanical controls. I am responsible for management, operation, engineering and maintenance of the GALCIT Super Sonic Shear Layer and GALCIT Hydrodynamics Laboratory. Most activities in these labs are undertaken with GALCIT graduate students under contract with the United States Air Force. I am also a contributing member to our team that writes technical proposals. All purchasing of technical items by members of our research team are reviewed and placed with my approval. I am also involved in my own research project utilizing a 200 Hz Yag Laser linked to an internally designed digital camera to study three dimensional turbulence with another engineer in our research group. Currently my work is focused on a the design of a converging shock experiment funded through the ASCI (Accelerate Computing Strategic Initiative)

#### **2000-2001**

Pacific Bell – Outside Plant Loop Planning Engineer for the Sacramento area. As a Planner for Pac Bell I was responsible for research and development of the "plant" in a specific area of Sacramento. This includes forecasting new growth requirements, implementation of DSL ready technology, and preparing (system level) engineering jobs or plans to pass to the Pac Bell Design Engineers (wire by wire/customer level). Project scheduling, cost forecasting, iteration of possible engineering solutions in pursuit of "best cost" solution, creating planning drawings and mappings, and project management are all aspects of the production and execution of a Pacific Bell Engineering Plan or Job.

#### **1999-2000**

EFI Technology – Systems / Support Engineer (full time) in the competitive automotive racing industry. EFI Technology develops, and constructs fuel injection systems and data acquisition systems for automotive race applications. Responsibilities included the design of wiring harnesses to be used with EFI's data acquisition equipment in the IRL (Indy Racing League), customer support of EFI's engine and data acquisition software/hardware, and track-side support of various racing teams during races such as the Indy 500. Other responsibilities included overseeing the production of the harnesses which I designed and technical sales of components and software to existing customers.

#### **1997 – 1999**

Formula SAE – Co-lead for developing and competing a Formula SAE race car for 98/99 school year. The annual Formula SAE competition in Detroit, which is hosted and sanctioned by the SAE, attracts entrants from over one hundred schools worldwide. As co-Project Leader for the 98/99 season, I shared responsibility for managing the development, construction, and competition of

UCSD's 98/99 Formula SAE racecar. My management duties included raising over \$20,000 from private sponsors, recruiting and coordinating the activities of a team of fifteen students, and overseeing the allocation of funds on a day to day basis. I was also responsible for the design and construction of the entire drivetrain for the car. During the 97/98 school year I designed, fabricated, and installed many components for the car including the pneumatic shifting system and the rack and pinion steering system.

**1998 – 1999**

Undergraduate Machine Shop / Senior Mechanical Design Course Teaching Assistant (TA) – I worked as a student machinist and TA at UCSD's AMES undergraduate machine shop for four quarters. Duties included teaching the machine shop class, supervision of students operating machinery, assisting engineering students with the development of their senior design projects, coordination with other engineers involved in UCSD's undergraduate design courses, using the mill and the lathe to machine components, and grading papers.

**1997-1998 (Summers)**

ISE Research - Mechanical Research and Design Intern. ISE Research develops and manufactures large scale (i.e. 30,000 lbs. or greater) electric trucks. Work included design and implementation of drive train components for ISER's United Airlines Towing Tractor prototype. I was responsible for the preparation of all Engineering CAD drawings using AutoCAD and for preparation of wiring schematics for the tow tractor. Other duties included research and development of new electrically powered auxiliary systems for ISER's class 7 and 8 truck projects.

**1995-1997**

KIDSAT program at UCSD - Internship. The KIDSAT program is the first-ever student run NASA mission supported by both NASA and the California Space Institute. This program is geared at educating middle and high school students about space and the Internet by photographing the earth from space during shuttle missions. KIDSAT was the first student run group to successfully fly a Payload on the Shuttle. Duties have ranged from managing the project, to planning and working in the Mission Operations Center for two KIDSAT missions. I also prepared and presented pre-flight mission briefings to two space shuttle crews. For more information go to [www.earthkam.ucsd.edu](http://www.earthkam.ucsd.edu).

**PROFESSIONAL ORGANIZATIONS:**

Society of Automotive Engineers (SAE) (Co-Chair of UCSD chapter, 1998-1999 school year)

American Society of Mechanical Engineers (ASME)

Beta Sigma Gama – Business Honor Society

EIT – Passed Summer of 1998

**TECHNICAL SKILLS:**

Software Experience: Unix, Windows, Matlab, NI LabView, MS Word, MS Excel, MS Project.

CAD – I-DEAS NX, Solidworks, AutoCAD (including some Mechanical Desktop),

**REFERENCES AVAILABLE UPON REQUEST:**