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George Melcer
ENGINEER | ARIST | INVENTOR

OBJECTIVE: I love all challenges where the answer isn't trival or/and obvious. I love roles creating awesome products with challenging requirements. Challenge me!

CAREER

MM SPORTS GROUP: FREELANCE DEVELOPER
High volume seller on StubHub wanted a program to automatically monitor their ticket prices and change them instantly to beat competitors.

RGB SPECTRUM: HARDWARE DESIGN ENGINEER
(1) Developed a framework to test claims of HDMI IC manufactures on the validity of their meausrement units within reciever chips.
(2) Developed a test aparatous for measuring airflow through a 5RU chasis for the purposes cooling.

INTEL: COMPONENT DESIGN ENGINEER
Triaged and debugged graphics related issues from Silicon through Driver. Was responsible for customer communication. Responsible for several large MacBook related updates.

LIQUID ROBOTICS: HARDWARE DESIGN ENGINEER
Designed an embedded system to accurately locate a moving object through the use of many noisy data sources (accelerometer, inertia, and compass). Completed all component selection, circuit design, layout, and build-up.

APPLE: PLATFORM ARCHITECTURE ENGINEER
Created hardware to easily interface with sensors used proposed for use in Apple products for the purpose of novel Human Interface Devices (HID). All work from hardware to data visualization completed.

IBM: ALGORITHM DESIGN ENGINEER INTERN
Developed a set of algorithms used to efficently disperse user-accounts across computing resources in a datacenter. Algoirthms operated off of data about the resource utilization of each computer.

HP: FIRMWARE DESIGN ENGINEER
Printers had SD Card reader to allow you to print without a computer. My feature allowed you to put bitmap overlays of user-created on the printer. The algorithm removed all and artifacts from shaky hands and smoothly scaled a bitmap from low to high resolution. Marketable feature in HP printers.

LANGUAGES

JavaScript · python · C

TECHNOLOGIES

Python Libraries/Frameworks:
selenium; json; xlrd; xlwt; urllib2; json; py2exe; pyserial;Tornado; opencv; threading; PIL;
C Libraries/Frameworks/Compilers:
OpenCV, POSIX, gcc
Web Technologies:
HTML; CSS
Hardware Design:
Component Selection; Circuit Design; PCB Layout; Board Bring-up
I/O:
I2C; RS232; SPI; PWM
Analog Circuit Design:
resonant circuits; oscillators; amplifiers; op-amps

IMPLEMENTATIONS

Image Processing:
image recognition; curve smoothing; box filter edge finder
Embedded Drivers:
accelerometers; pressure transducers; WiFi; Rotary Encoders; HDMI Receiver/Transmitter
HAL:
RTC; RS232; I2C; SPI; irq routines
HID:
command line interface; menu interface; knobs; momentary push-buttons; position/movement data