Sakar Khattar

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OBJECTIVE
Seeking full time work opportunities as Software Engineer

EDUCATION

Carnegie Mellon University, Entertainment Technology Center (Pittsburgh PA, USA)
Master of Entertainment Technology *(GPA: 3.77/4.0)* (Jan 2012 – Dec 2013)

Indraprastha University, Bharati Vidyapeeth College of Engineering (New Delhi, India)
Bachelor of Technology - Computer Science Engineering (Aug 2007 – May 2011)

SKILLSET

Technical:			*Media:*	*Skills:*
C++	iOS Development	Git/SVN/Perforce	Photoshop	Strong 3D Math Concepts
C	Java/Android Development	MySQL/SQL Server	Sketch	Compositing
C#	Qt/QML	.Net Framework/WCF	Premiere Pro	3D Modeling
OpenGL	HTML5/CSS	Unix shell scripting	After Effects	Photography
Python	JavaScript/jQuery	Beckhoff Industrial Automation	3ds Max	Video Editing
Objective C/Swift	Django Web Framework	Impact JS Game Engine	Nuke	Cinematography

Languages: English (Fluent), Hindi (Fluent)

PROFESSIONAL EXPERIENCE

Lucid Motors – *Senior Software Engineer (User Interface)* (Jan 2016 – Present)
- Developed complete Infotainment system from scratch in *Qt/QML/C++/Android/AOSP,* now functional in Lucid Air electric car fleet
- Developed *iOS application* and backend logic to enable *remote control* of USP features of the car like rear seats, headlights & others
- Coordinated display & control of vehicle functions & state across multiple screens UI, communicating with other systems via *CAN bus*
- Developed application logic & architecture; ownership of frontend: *60fps smooth pixel perfect UI, complex animations, OpenGL 3D scenes*
- UX design, prototyping and development of applications such as *Media, Vehicle Controls*, & refinement user facing features & interactions

Autonomic Controls – *Software Developer* (Jan 2015 – Dec 2015)
- Developed features for Mirage Media Streaming Server (*Windows & Debian*) in C# like *music cloud backup & sync* via *Google Drive*
- Enabled new partnerships by creating Autonomic *drivers & UIs* for automation clients like URC (*touch panels, remotes, iOS, Android*)
- Improved project build phase by *optimizing compile script* (*MSBuild*) and reducing size of final executable package
- Developed user facing webpages (*HTML,CSS,JS*), regression testing, customer support cases, technical videos & documentation

Brighten (Anonymous positive social network startup) – *Software Developer* (Aug 2014 – Jan 2015)
Implemented design overhaul of *iOS* app (old version on App Store) with *Django* backend. Investor pitches, Accelerators, Hackathons

Walt Disney Theme Parks and Resorts, Orlando - *New Technology Analyst* (Aug 2013 – Aug 2014)
- Developed complete software layer in C++ & C# for a *Disney Ride Media Capture System* recording high speed videos & photos, with real-time DMX lighting and camera control time accurate to 100μs. Remotely configurable via REST API. First media system in park to use industrial automation, to be adapted to other Disney rides. Conducted training & wrote extensive technical documentation
- Created *iOS App* using *iBeacons (BLE)* for showing location based contextual information
- *UI design and programming* for HTML5 desktop and mobile data dashboards, with PHP backend
- Customized and tested *objective-C Blackmagic* camera video capture code using proprietary Disney API

Columbia University, EdLab - *Software Development Associate* (June - Aug 2013)
Developed educational web applications in *Django-Python* framework. Rewrote HTML5 compatible code for newlearningtimes.com, created newsletter module (replacing mailchimp), improved site search index functionality

Carnegie Mellon University - *Multimedia TA*, Recorded and edited live video presentations, dept. photography work (Aug - Dec 2012)

ACADEMIC EXPERIENCE

Computer Graphics (***Won Gold for Ray Tracer in class. Overall Class Rank 2nd***)
- OpenGL programming in C++. *Highlights*: Ray Tracer - Depth of field, lighting effects such as soft shadows, glossy reflections
- Other Projects: Physics simulation, scene rendering, mesh subdivision and smoothening, optimization, GLSL shaders

DARPA Engage (***Publication - IEEE International conference for Computer Games, 2013***)
- Web based educational game for DARPA ENGAGE initiative teaching STEM principles to kids 6-8 years old
- User Interface, XML and Gameplay Programming in HTML5 and JavaScript

Augmented Reality Visualization Researching and predicting future technologies and devices in 20 years. Deliverable 5 min video showcasing vision of the future. Cinematography, Compositing, Software Pipeline Handling, Technology Research

Building Virtual Worlds 3D Modeler (3DS Max). Rapidly prototyped interactive virtual worlds in 2 weeks in 4-5 person teams