

KANG, JEON-HYUNG

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EDUCATION

- University of Southern California Aug 2008 – May 2010
- M.S. in Computer Science
- Ajou University Mar 2001 - Feb 2008
- B.S. in Computer Science

SKILLS

- C++, C, Java, Visual C++, MFC, Object-C, Matlab
- PHP, HTML, Python, GraphML, XML, XQUERY, RDF, CSS, MySQL, Berkeley DB
- Flash Action Script, OGRE Engine, GGE Engine
- OpenKapow, Dapper, Yahoo Pipes, Mallet, SPARQL, PiggyBank/Solvent ,Prometheus mediator (Datalog)

ACADEMIC PROJECT EXPERIENCE

V Cache Manager: Developer & Designer (Database Systems | Spring 2009)

- Design & Implementation Berkeley DB cache manager
- Implement Berkeley DB DRAM & Magnetic Disk
- Based on Greedy Dual Cache Management Techniques for Mobile Devices

Generating Location-based Information: Developer (Information Integration on the Web | Spring 2009)

- Generating Ontology from Flickr Tags
- Mine a corpus of tagged photos from Flickr
- Advanced subsumption based approach & dependency parse tree
- Input: location name or address / output: location based information visualization in tree & triples

Discovering and Learning Semantic Models of Online Sources: Developer (Machine Learning | Spring 2009)

- Mine a corpus of tagged documents from the social bookmarking site del.icio.us
- Source discovery: finding similar web-sites with seed source based on the tags, users, documents
- Learn latent topics using Latent Dirichlet Allocation & gather related sources using Jensen and Shannon divergence

Face and Motion Detection: Developer (Artificial Intelligence | Fall 2008)

- Matlab “Neural Network Toolbox” to create neural networks recognizing faces and motions of objects
- Design & train a neural network to distinguish 20 different faces regardless of their facial expressions.
- Design & train a neural network to recognize each of 5 different motions (Up, Down, Left, Right, and Diagonal)

Any-angle path planning for computer games: Developer (Artificial Intelligence | Fall 2008)

- Implement Searching algorithm in grids with blocked and unblocked cells: A* and Theta*

Bayesian Networks (GeNie): Designer (Artificial Intelligence | Fall 2008)

- Design & implement expert system that performs inferences the probability of winning in Monopoly

WORK EXPERIENCE

Information Integration Research Group, Information Sciences Institute (Internship | May 2009 - May 2010)

- Dynamic Centrality Algorithm
- Finding “Community” and “Leaders and Negotiators” in heterogeneous networks.

Pedagogical Discourse Project, Information Sciences Institute (Internship | May 2009 - May 2010)

- Information Flow analysis based on speech act classifier and source, sink, expected sink and expected source.
- Profiling student groups in online discussion with network analysis.

- Connecting students to past discussions in online discussion board using Topic modeling.

Database Lab, USC

(Student | May 2009 - Jun 2009)

- "V Cache Manager Open Source Project"

Software Laboratories, SAMSUNG ELECTRONICS: Developer & Researcher

(Internship | Mar 2007 - Aug 2007)

- "Matrix" project: context-aware collaborative middleware & frameworks for application to mobile devices.
- Develop & test "**Sensor Framework**" for the Context Pack
- Research RFID tag formats, reader and communication protocols
- Design RFID & Near Field Communication system middleware architecture

RELATED EXPERIENCE

Apple iPhone Applications Develop: Developer

(Mobile Device | May 2009 - Aug 2009)

- Location Based Social Web

Navy vs. Pirate Game Develop, USC GamePipe Laboratory: Developer

(Game | Feb 2009 - Apr 2009)

- Develop 3-D Environment using OGRE, GGE engines

Facebook Applications Developer group: Project Manager & Developer

(Web | Aug 2007 - Mar 2008)

- Develop drawing & playing tool Flipbook
- Design & implement for database, MySQL
- Implement & design page flipping effect playing tool in Flash action-script
- Implement Facebook applications using PHP, FBML, and JavaScript

Wireless Network project: Project Manager & Developer

(Wireless Sensor Network | Mar 2006 - Jul 2006)

- Smart advertisement, wireless advertisements system using **ZigBee** & other sensors
- Design and implement DB for purchasing information, personal information and shop information.
- Implement Guaranteed Time Slot in IEEE 802.15.4 standard medium access control layer
- Implement sensor platform (light intensity, temperature, humidity, gyroscope and feeling sensor)

Information Security project: Project Manager & Developer

(Security | Mar 2006 - Jul 2006)

- Design and implement a host and network based Intrusion Detecting System (**IDS**)
- Experiences on both system and network attacks
- Design and implement network packet inspection real-time security monitoring system

OTHER WORK EXPERIENCE

KATUSA (Korean Augmentation to the **United States Army**)

(May 2003 - Jun 2005)

- Radio Operator & Senior KATUSA

Primary Leadership Development Course (WLC)

(Jul 2004 - Aug 2004)

- **United States Army NCO Academy** at Camp Jackson Wightman
- Conduct a tough and demanding Warrior Leader Course
- Leadership Ability, Technical and Tactical Proficiency, and War fighting Skills of the NCO Corps

PUBLICATIONS

- Kristina Lerman, Jeon-Hyung Kang, Dylan Shell, Dynamic Network Analysis with Application to Mobile Robot Networks, in submission
- Jeon-Hyung Kang, Jihie Kim and Erin Shaw, Profiling Student Groups in Online Discussion with Network Analysis, Proceedings of the K-CAP 2009 workshop on Analyzing Social Media to Represent Collective Knowledge, 2009.

ACHEIVEMENTS

Recipient, Ajou University Academic Achievement Scholarship

(Spring 2006|Fall 2006|Spring 2007)

Recipient, Ajou University Outstanding Student Scholarship

(Fall 2005|Fall 2007)

Recipient, Ajou University Dean's Scholarship

(Fall 2006)

Recipient, **The Army Commendation Medal** by the secretary of the **U.S. Army**

(May 2005)

Recipient, **The Army Achievement** by the secretary of the **U.S. Army**

(Jun 2004)