

# Jacob Kalakal Joseph

Artificial Intelligence, Machine Learning, Data Science, Game Theory,  
Python, Git, Automation, Information Retrieval and Web Search Engines,  
Software Architecture and Design, Product Development, Project Management

## Experience

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**Intel Corporation** (CCG - Client Computing Group)

Folsom, USA

Software Engineer

Jan 2013 – Present

- **Product Owner** of two internal web applications accessible to all Intel CCG employees. Built both from scratch. (1) The first web-app tracks customer enablement activities across various Intel platforms, generates scores and indicators to track progress and evaluate program risks, collates customer design and schedule information to auto-generate visually appealing, ready to use, actionable reports. (2) The second web-app analyzes historical internal and customer data to forecast future trends. Allows user to override default weights and simulate ‘what-if’ scenarios.
- **Software Design and Development:** Write code (*Python*), design APIs, draft user-interaction models, develop flowcharts and data flow diagrams, develop highly customizable role-based access management, design for scale and extensibility to promote feature growth and future expansion.
- **Project Management:** Interview and hire developers – mostly interns and contract workers, keep deliverables and project execution on track, prioritize tasks, communicate risks and strategize creative solutions, roll-up executive reports, execute biweekly sprints (*GitLab*).
- **Customer Engagement:** Collate user requirements, define use-cases, conduct user trainings and live demos, document wiki, make and publish demo videos.
- **Collaboration:** Partner with cross-org, cross-geo Intel teams. Engage Intel’s customers and partners – Microsoft, HP, Dell, Lenovo, etc. Enable *Microsoft Surface Studio* (all-in-one PC, Dec 2016), *HoloLens* (mixed reality smart-glasses, Mar 2016), *Surface Hub* (interactive whiteboards, Jun 2015), *Surface 3* (2-in-1 detachable, May 2015) etc.

**Intel Corporation** (MCG - Mobile and Communications Group)

Folsom, USA

Software Engineer – Graduate Intern

Jun 2012 – Dec 2012

- Develop an **Android App** for Fuel Gauge debugging on Intel Atom based tablets. Demonstrate the App during the *2012 Software Professionals Conference (SWPC)*.
- Develop **Python scripts to Automate Testing** of Intel-Windows devices – file transfer, video and music playback, performance benchmarking.
- Build a **Lego Mindstorms NXT 2.0 based Prototype Robot** that holds and manipulates (up, down, left, right, front, back) a stylus kept over a tablet to perform automated Touchscreen sensor stress-and-stability tests.
- Build an **ArbotiX RoboController based Prototype Robot** that holds and moves (rotate, tilt) a tablet to perform automated Accelerometer and Gyroscope sensor stress-and-stability tests.

## **Infosys Limited**

- Software Engineer Consultant at **Intel Corporation**  
NTG - Netbook and Tablet Group  
Nov 2007 – Dec 2010  
Bangalore, India  
Sep 2010 – Dec 2010
- Software Engineer Consultant at **Microsoft Corporation**  
Microsoft Windows Embedded Compact  
Hyderabad, India  
Sep 2009 – Aug 2010
- Software Engineer Consultant at **Microsoft Corporation**  
Microsoft Deployment Toolkit  
Hyderabad, India  
Apr 2008 – Aug 2009

## **Education**

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### **University of Southern California**

Master of Science in Computer Science

Los Angeles, USA

Jan 2011 – Dec 2012

**Courses:** Artificial Intelligence, Software Multi-Agent Systems & Game Theory, Information Retrieval & Web Search Engines, Database Interoperability, Ontologies & Semantic Web, Geospatial Information Management & Spatial Databases, Analysis of Algorithms, Software Architectures, Web Technologies

**Select projects** (work samples available at [jacobkjoseph.com](http://jacobkjoseph.com)):

- Context Sensitive Lucene: context-sensitive search engine prototype using Apache Lucene (an open source information retrieval library) and Altervista Thesaurus (an ontology based web service)
- Image decryption employing Genetic Algorithm techniques and other strategies to navigate noisy input
- Master Mind: logical code breaker agent using Jess (a Java based rule engine)
- Security Games with Limited Surveillance (SGLS) - Game Theory model for computing optimal defender strategy with limited adversary surveillance
- Android App that track user's Facebook friends' location and timestamped trajectory on Google Maps
- Android App that retrieves local weather information from Weather.com and post on user's Facebook wall

### **Uttar Pradesh Technical University**

Bachelor of Technology in Computer Science and Engineering

Lucknow, India

Jul 2003 – Jun 2007

**Select courses:** Algorithms, Data Structures, Operating Systems, Database Systems, Computer Networks, Software Architecture, Automata & Compiler Design, Computer Architecture, Computer Organization, Cryptography and Network Security, Computer Graphics, Advanced Mathematics