# Sang-Joon Lee

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## Education

**MASTER OF SCIENCE, COMPUTER SCIENCE | BOSTON UNIVERSITY | SEPT 2015 – DEC 2016**

· Related coursework: Artificial Intelligence, Image and Video Computing, Distributed Systems, Databases, Algorithms

**BACHELOR OF APPLIED SCIENCE, COMPUTER ENGINEERING | UNIVERSITY OF TORONTO | SEPT 2000 – MAY 2005**

· Related coursework: Software Engineering, Operating Systems, Computer Architecture, Digital Signal Processing

## Work Experience

**SOFTWARE ENGINEEER (INTERN)| PHILIPS RESEARCH NORTH AMERICA| JUN 2016 – DEC 2016**

· Led research and development of a prototype augmented reality software for integration with Philips Lighting technology.
· Led investigation of integrating Facebook PrestoDB with MySQL, Hadoop Hive, MongoDB, Postgres and Cassandra.
· Languages: C++, Objective-C, C#
· Tools: iOS, Xcode, OpenCV, Unity3D, Vuforia SDK, Estimote Bluetooth(BLE), AWS S3, AWS DynamoDB, PrestoDB

**SENIOR APPLICATIONS ENGINEER | MATHWORKS | FEB 2012 – JAN 2015**

· Technical focal point for major customers as an expert in Model-Based Design development using MATLAB & Simulink products, such as control system development, physical modeling, and code-generation for embedded systems.
· Responsible for debugging, investigating and resolving technical issues from major customers in Aerospace, Automotive, Medical, Energy, and Controls industries – who are using Mathworks products to develop advanced control & systems.
· Technical Projects: Embedded Technology Robocon Competition – led a team of 15 engineers to design and develop two-wheel balancing robot for autonomous navigation. Led for 3 years.
· Languages: C/C++, Java, MATLAB
· Tools: Visual Studio, MATLAB, Simulink, Perforce, Git

**SENIOR SOFTWARE & SYSTEMS ENGINEER | PROLUCID | NOV 2010 – FEB 2012**

· Member of software consulting startup with less than 10 engineers. Responsible for the complete software & hardware development life cycle process from requirement gathering & design, implementation, testing, deployment, project management and customer support.
· Led development of customized software & hardware for clients including embedded control system design, FPGA, real-time signal processing for industrial real-time monitoring software and product prototyping for product commercialization.
· Languages: C/C++, SQL, HTML, LabView
· Tools: LabView NI DAQ, MySQL, Perforce

**SYSTEM DESIGN ENGINEER II | HONEYWELL AEROSPACE | MAY 2005 – NOV 2010**

· Member of advanced technology research and development team at Honeywell Aerospace Power Systems Group. Worked in parallel with principal systems engineers and cross-functional engineering groups to design, implement, and execute system design and verification of avionic systems, and built prototypes for future product research & development.
· Technical Projects: System modeling for Electrical Power Distribution System for Commercial & Military Aircraft – led team of 5 engineers modeling software and hardware system using MATLAB & Simulink and code generation in C for embedded systems.
· Languages: C/C++, MATLAB
· Tools: MATLAB, Simulink, SVN, PVCS, DOORS

**SYSTEM DESIGN ENGINEER (INTERN) | HONEYWELL AEROSPACE | MAY 2003 – AUG 2004**

· Responsible for developing auto-code generation tool for rapid prototyping software development code, resulting in extensive cost savings throughout various projects.

## Skills

- Languages:        C/C++, Objective-C, C#, MATLAB, Python, Java, Javascript, Go, HTML, CSS
- Tools:            MATLAB, Simulink, LabView, OpenCV, Node.js, MySQL, Postgres, AWS, Presto
- CM:              Perforce, SVN, Git

## Publications

- David Lazarovich and Sang-Joon Lee, "Approach for an Integrated Multi-Domain Aircraft Energy Model", SAE International Journal of Aerospace, April 2009 vol. 1 no. 1 1053-1058.
- Ileana Rusan, Sang-Joon Lee and Anantha Koduru, "Early Validation of Power Distribution Channel Controller LRM Requirement using Rapid Prototyping Simulations", SAE Power Systems Conference, Seattle, Washington, Nov 11-13, 2008.
- Sang-Joon Lee and Kaamran Raahemifar, "FPGA Placement and Optimization Methodology: A Survey", IEEE CCECE'08: Symposium on Circuits, Devices and Systems, Niagara Falls Canada, May 4-7, 2008.

## Patents

- Inventors: David Lazarovich, Ileana Rusan, Joe Nutaro, Sang-Joon Lee, Ted Gayowsky, Title: "Method for Active Power Management And Allocation of Functionality", United States Patent 20100280682, Issued November 4, 2010.