Kushagra Gupta

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Education

University of Illinois at Urbana-Champaign, BS. Electrical Engineering, Sophomore, GPA: 4.0/4.0 *Champaign, Illinois, 2016-2019*

Current Chancellor's Scholar, Engineering James Scholar, and recipient of the Provost Scholarship

Illinois Mathematics and Science Academy, GPA: 4.0/4.0 *Aurora, Illinois, 2013-16*

Experience

Sphero Inc., Incoming Hardware Development Intern *Boulder, Colorado, 2017*

Will be developing consumer-facing robots, working directly with hardware components at the microcontroller level

ParkWhiz LLC, Software Development Intern *Chicago, Illinois, 2015-16*

Built a back-end analytics platform to monitor customer actions on the ParkWhiz site and mobile applications

Utilized Go, Ruby, SQL, and Docker to write and deploy the service to ParkWhiz servers

Determined ways to use this data to make informed business and marketing decisions

Harvard University's Whitesides Research Laboratory, Student Researcher *Cambridge, Massachusetts, 2015*

Developed prototypes for pneumatically-actuated walking robots built entirely out of "soft" components

Designed and assembled an Arduino-based platform on which to automate robot actions

Conducted research regarding the applications of electromagnetically-induced oscillation in robotics

Skills

Languages and Frameworks

Experienced: Java, Javascript, HTML, Ruby, Go, SQL, C, Arduino, CSS, Python, Assembly/LC3 Programming

Familiar: C++, Android, iOS, MATLAB, Wolfram Language, Google App Engine

Software

Git, SVN, Eclipse, Atom, Adobe Photoshop/Illustrator/Lightroom/Premiere, Inkscape, Microsoft Office, Verilog, LaTeX

Current Classes

ECE486: Control Systems CS225: Data Structures CS173: Discrete Structures

Classes Taken

ECE210: Analog Signals Processing ECE220: Computer Systems Programming MATH286: Differential Equations Plus

ECE110: Introduction to Electronics ECE120: Introduction to Computing MATH241: Multi-variable Calculus

Projects

Applications of Electromagnetically-Induced Oscillation in Robotics *Whitesides Research Laboratory, 2015*

Invented a method to harness the vibrations of an oscillating magnet in order to achieve locomotion

Created and implemented an algorithm to track a magnet's position in 3D space within an arrangement of electromagnetic coils

Artificial Intelligence Research Using Heuristic Analysis *Illinois Mathematics and Science Academy, 2014-15*

Designed a simulation to test player actions in risk-reward scenarios

Implemented a series of artificial intelligence algorithms that utilized heuristics to analyze a game-state tree which achieved a 90% win rate against humans

Extra-Curricular Involvement

Office for Technical Consulting Resources, Consultant *University of Illinois at Urbana-Champaign, 2016-18*

Developed business strategy and technical solutions to solve real-world problems for companies ranging from local start-ups to Fortune 500 corporations

ECE Pulse, Marketing and Design Director *University of Illinois at Urbana-Champaign, 2017-18*

Build Pulse brand and coordinate design and advertising across all platforms for week-long event hosting hundreds of students

Indian Student Association, Freshman Representative *University of Illinois at Urbana-Champaign, 2016-17*

Organized events to promote Indian culture and built and maintained a social media presence with more than 3,000 followers

Interests

Cooking | Graphic Design | Photography | Music