Patrick Lin

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EDUCATION

University of California, Berkeley: Bachelor of Arts in Computer Science GPA: 3.3 Expected Graduation: May 2015

SELECTED COURSEWORK

Data Structures, Computer Architecture, UNIX System Administration, Artificial Intelligence, Computer Security, Database Systems, Computer Networking, Human Computer Interaction, Efficient Algorithms and Intractable Problems

RELATED EXPERIENCE

Skills: Python, Java, C, Eclipse, Android SDK, Git, UNIX (Bash), Linux, SQL, assembly, LaTeX, Microsoft Access, Visio, Photoshop

Visa Inc: Global Information Security Intern (June 2013 - August 2013) Foster City, CA

- Drafted and presented a website wireframe and development plan to improve the information security department's process and communication, using data gathered from interviewing 27 global Visa employees (Balsamiq)
- Analyzed an Android web browser's obfuscated source code, documenting and presenting the application's architecture and possible vulnerabilities, with an emphasis on Kerberos, WebKit, and S/MIME implementations
- Researched industry best practices concerning encryption methodology and cryptographic key management (NIST, KMIP, IETF standards) and audited existing company technical specification requirements for discrepancies and shortcomings

PROJECTS

Wordtastic: Developed a voice-operated, custom flashcard-based Android app to encourage parent-child interaction and facilitate vocabulary building. Completed task analysis, mockups, low and hi-fi prototypes, and user testing. (Balsamiq, Java)

Database Design: Architectured and built a fully functional, normalized relational database for a yoga studio, with EER diagram, schema, tables, and queries, and business applications like generating a heatmap of client locations and calculating the optimum expansion locations via k-means clustering (Microsoft Access, Visio, Python, Google Maps API)

SimpleDB: Implemented a custom database management system, including the base structure and tuple catalog, support for SQL queries, query optimization via plan generation and cost estimation, and concurrency control (SQL, Java)

Pacman AI: Created a multi-level implementation of search algorithms, game trees, evaluation functions, and reinforcement learning techniques to create an efficient Pacman-playing agent (Python)

Network Attack: Simulated various network and application level attacks with OpenSSL, Wireshark, sslsniff, and ScaPy to generate RSA keys, falsify certs, decrypt TLS-secured traffic, conduct MITM attacks, and spoof DNS responses (Python, Bash)

Virtual Machine Hacking: Exploited various real-life vulnerabilities in C and x86 code to bypass the login of a class Linux VM and gain root access through use of network tools (netcat, nmap) and various scripts (Python, Bash, C)

Network Simulators: Implemented simulations of distance-vector protocol routing, reliable bi-directional UDP packet receivers with variable sliding windows and selective acks, and stateful, active end-host firewalls (Python)

OTHER EXPERIENCE

Innovative Design: Photography Student (January 2014 – May 2014)
Participated in weekly photography lessons and served as freelance photographer for various student events.

Berkeley Student Cooperative: Housing Administrative Assistant (September 2012 – May 2014)
Updated and maintained accurate physical and digital records of the BSC's 1300 current residents and thousands of alumni, and publish minutes for weekly council meetings of a self-governed house of 64 students

Pioneers in Engineering: Student Team Mentor (January 2013 – May 2013)
Guided a team of high school students through the process of designing, assembling, and programming (in C#) an autonomous and remote controllable contender against 23 other teams into the robotics competition's quarter finals

Blackhawk Network: Project Management Intern (January 2013)
Interviewed over a hundred employees to update the company's internal badging systems and SuccessFactors directory