

DURGESH PANDEY

Center for Security, Theory and Algorithmic Research
Computer Science and Engineering
International Institute of Information Technology,
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EDUCATION

Institute : International Institute of Information Technology (IIIT) - Hyderabad, India.
Degree : B.Tech (Hons.)& MS by Research.
Stream : Computer Science and Engineering.
Expected : July 2017.
CGPA : 8.65/10.
Master's Thesis Adviser : Dr. Kannan Srinathan.
Master's Thesis Topic : A Protocol for Homomorphic Encryption Scheme.

WORK EXPERIENCE

Teaching Assistant-IIIT Hyderabad

Principles of Information Security : Spring 2017 (current) & Spring 2016.
Advanced Computer Network : Monsoon 2016.
Probability Theory and Complex Analysis : Monsoon 2015.
Formal Methods : Spring 2015.

Open Source Development Intern : Google Summer of Code

Organisation : Network Time Foundation.
Project Mentor : Dr. Judah Levin, Physicist (NIST)
Project Name : Study of usefulness of computer clocks.
Project Details : Concepts like Allan deviation and it's multiple versions and topics related to clock disciplined algorithms were studied and relevant algorithms were implemented in python language. An experiment was conducted for establishing a correlation between system's temperature & clock's offset.

ACADEMIC PROJECTS

- Design and Implementation of Compiler:** A compiler for Decaf programming language implemented in C++ using flex and bison as parsing tools. Grammar of the language and AST for that grammar were implemented. LlvM IR was generated.
- Linux Mini Terminal:** A mini terminal was implemented in C using OS concepts like fork, exec, signals etc.
- Object Detection in Images:** Used SVM and PCA for human & eye detection in Matlab on Inria-Person dataset.
- OpenGL based 2D and 3D Games:** Implemented a 2D game based on spider dropping and laser shooting. Designed a bike racing game in 3D world using OpenGL and C++.
- Shopping cart Implementation:** Developed a fashion based shopping cart and *reddit.com* skeleton using Python, HTML/CSS and SQLite through web2py MVC framework.
- Secure and Reliable File Transfer in a Client-Server Communication Model:** Developed a tool using socket in C and concepts like RSA, MAC and Digital Signature.
- Key Management Protocol in Distributed Wireless Sensor Network:** Built a research Proof-of-Concept for a standard key management protocol including implementation of direct key & path key establishment phases given by Laurent Eschenauer et al. in C++ language.

SKILL SET & INTERESTS

- Programming Languages : C, C++, Python, Matlab, Java (moderate).
- Web Technologies : HTML, CSS, JavaScript.
- Other Skills & Interests : Linux, Web2Py, Mysql, Emacs, Cisco Packet Tracer, Metasploit & NMap (basic) Algorithms, Software Development Engineering, Cryptography, Cyber security, Operating System, Open source, Cryptocurrency, Mathematics.

ACHIEVEMENTS AND OTHER ACTIVITIES

OCT. 2016 : Academic Awards (Dean's Merit List) for the academic year 2014-15 and 2015-16.
SEPT. 2012 : 1st Rank and Prize in Science Fest (Manthan).
JUL. 2009 : 1st Prize for best academic performance in mathematics department.
FELICITY 2014 : Member of event organising team for event Cache-in (A treasure hunt based event).