Vinay Manikandan Nagarajan

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https://vinay-nagarajan.github.io , https://github.com/vinay-nagarajan , https://linkedin.com/in/vinay-nagarajan

Education

Senior in Computer Engineering, Purdue University, West Lafayette, IN May 2018
Bachelor of Science in Computer Engineering GPA: 3.45/4.0

Relevant Coursework: Advanced C Programming, Data Structures & Algorithms, Microprocessors Interfacing, Object Oriented Programming, ASIC Design, Discrete Math, Compilers, Computer Architecture

Technical Skills: C, C++, Python, Java, HTML, JavaScript, Version Control, Django, Verilog, Bash, Assembly

Work Experience

1. Hughes Network Systems, Germantown, MD – Software Engineering Intern **Summer 2017**

- Developed client and server scripts to simulate S1AP messages to develop a 4G LTE Simulator.
  Skills: Socket Programming in Python, S1AP Protocol
- Implemented functionality test of data flow in GPRS Tunneling Protocol contexts by creating virtual network interfaces.
  Skills: GTP Protocol, TUN/TAP Interfaces
- Developed a Python tool to download configuration files from Server in UNIX Machine to Windows PC and use version control to periodically commit changes to a stack.
  Skills: Git -Version Control, SCP, SSH, Stack
- Prepared a requirement doc, design doc, Test plan and accompanied it with test results
  Skills: Understood and implemented Application Development Life Cycle

2. Teaching Assistant - Data Structures & Algorithms **Spring 2017**

- Helped students with concepts of data structures and projects on a weekly basis

3. SPN Corporate Services, Bangalore, India - Software Intern **Summer 2016**

- Developed task planner app to schedule pending tasks and rank them using due dates and customer priority.
  Skills: Graph Algorithms - DFS Topological Sort, Stack Implementation

Project Experience

1. Awarded Second Place - Nationwide Engineering Academic Program Contest **Fall 2016**

Designed a smart car prototype using HCS12 Microcontroller, Arduino Board
Skills: Embedded C, Assembly Programming

2. Projects on GitHub **Spring 2016 - Present**

- Steganography – Embedding a Payload Image within a Carrier Image
  Skills: Python, QT GUI, NumPy, SciPy libraries in Python
- Zork – Interactive Fiction Game developed in C++
  Skills: C++, Vectors, Inheritance, Hash Maps
- MHacks8 Hackathon - 'Bounced' – Interactive Multi-Level Java Game
  Skills: Java, Multithreading, 2D Graphics & Animation, gravity and collision detection
- BoilerMake IV Hackathon – Interactive Online Job Portal
  Skills: Flask, Python, jQuery

3. Discovery Park Undergraduate Research Project under Prof. Daisuke Kihara **Fall 2015**

- Development of protein 3D structure prediction algorithms, protein docking prediction algorithms
  Skills: Image Processing in C, Floyd-Steinberg Dithering

4. Smart Android Assistant (App in Google Play Store) - http://goo.gl/65hECv **Summer 2015**

- Voice Assistant, performs functions: emergency location informer, calling, sending text messages
  Skills: Android Studio, Java, XML

5. Engineering Projects in Community Service (EPICS) - Information Systems
Project Manager and Project Partner Liaison **Fall 2014 - Spring 2015**

- Led a team of software engineers to develop a web application connecting over hundred student organizations at Purdue to the West Lafayette community
  Skills: Django, HTML, JavaScript

Leadership Experience

National Organization for Business & Engineering (NOBE) **Spring 2015 - Spring 2017**

- As President of NOBE, organized workshops, seminars for professional development, corporate interaction

Purdue Engineering Student Council (PESC) **Spring 2015 - Spring 2016**

- Assisted in organizing and conducting the spring and fall job fairs (EXPO and Industrial Roundtable).

Academic Honors

- **Charles W. Brown ECE Scholarship; Eli Shay ECE Scholarship** **Fall 2015-Spring 2018**