Navin Pathak

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EDUCATION

Hofstra Northwell School of Medicine, Hempstead, NY
MD, expected May 2021

Rice University, Houston, TX
BS in Bioengineering, May 2014
GPA: 3.76/4.0
Science GPA: 3.68/4.0
President's Honor Roll (3x)

EMPLOYMENT

Epic
Interface Engineer (EDI) 2014-2016
- Lead a 2-year, 3rd party interface installation at Johns Hopkins for their academic hospitals through collaboration with their 14-person interfaces team
- Presented interface design to over 100 clinical and technical personnel at Johns Hopkins Hospital for workflow validation
- Owned workflow direction sessions for interface division, collaborating with interface implementation leadership to improve process for workflow direction sessions
- Designed and developed server code for clinical interfaces with 3rd party systems following industry standards (HL7) as well as principles laid out by Epic developers.

Rice University
Teaching Assistant for Electronics Lab 2013-2014
- Introduced concepts and reviewed course materials relevant to lab course
- Provided expertise for students on circuit design and algorithms

Teaching Assistant for Bioengineering Fundamentals Course Fall 2012
- Advised and facilitated discussion among students for homework problems
- Graded homework problems on a biweekly basis

RESEARCH EXPERIENCE

Rice University Capstone Design 2013-2014
Capstone Design Student
- Designed and documented ESE Pace, a novel device for temporary emergency pacing with interdisciplinary design team
- Collaborated with Dr. Mehdi Razavi at Texas Heart Institute
- Filed provisional application for patent
- Lead multiple animal studies on lambs with prototypes

Rice University Department of Biochemistry 2012-2013
Undergraduate Researcher under Dr. Edward Nikonowicz
- Presented 15-minute talk at Regional Undergraduate Symposium at Rice University
- Analyzed Nuclear Magnetic Resonance (NMR) data on the histone pre-mRNA stem-loop from the malarial parasite *P. falciparum* on a Unix server
- Reviewed literature outlining previous research on *P. falciparum* stem-loop structure

UT Southwestern Medical Center

Research Fellow under Dr. Zbyszek Otwinowski Summer 2012

- Designed protocol to find and cluster repetitive elements in human genome and *de novo* sequence reads from next generation sequencing techniques using C++
- Classified repetitive groups and validated method against previously identified repetitive elements in the human genome
- Reviewed literature outlining previous research on genome repeats and analysis of the human genome through computational methods
- Presented final research poster to program mentors and fellows

PROGRAMMING EXPERIENCE

Norhwind Demo Application Spring 2014

Student Web Developer

- Designed a system for entering and editing products using the Northwind database
- Used modern encryption techniques to ensure secure data exchange
- Built site using PostgreSQL, Node, Express, and Angular with a teammate

Package Management System Spring 2014

Volunteer Software Engineer

- Designed a system in Java for college mail room
- Documented and licensed software under open source license (see Github)
- Implemented software with Jones College Coordinator
- Expanded software to other residential colleges throughout Rice University

CLINICAL EXPERIENCE

MD Anderson Cancer Center Spring 2014

Clinical Interpretation Intern

- Shadowed Spanish interpreters across multiple specialties
- Actively involved myself in the interpreting process, learning both language and culture of the patients of different nationalities
- Observed multiple procedures across different specialties within cancer center

Dallas Area Physician Shadowing Summer 2013

Student Shadow

- Shadowed an electrophysiologist, a pediatrician, and an outpatient oncologist in group and private practice settings
- Gained broad knowledge in these specialties and solidified resolve to study medicine

COMMUNITY INVOLVEMENT AND EXTRACURRICULARS

Jones College Academic Fellows 2012-2014

Academic Fellow

- Planned and advertised Q&A panels with graduate and medical students
- Tutored introductory physics and bioengineering courses weekly with small groups
- Coordinated and lead large group review discussions prior to major exams

Designing with Rice Engineers: Achievement through Mentorship 2011-2013

Class Lead Mentor

- Coordinated 4 mentors and prepared material for class of 18 students in Stephen F. Austin High School weekly for specified design project
- Presented design criteria and updates to the class on a weekly basis
- Followed and mentored individual design teams for multiple projects
- Encouraged enrollment in higher education and engineering through conversation

Engineers without Borders 2010-2011

Nicaragua Team Engineer

- Designed and documented a bridge with Rice Engineers without Borders teams
- Developed and translated user manuals to Spanish for use by local community
- Traveled to and constructed bridge with community of El Panama, Nicaragua

SKILLS

- *Programming Languages*: Unix, C++, Python, Java, HTML, CSS, JavaScript, SQL, MATLAB, MUMPS
- *Computer Skills*: Proficient in Microsoft Word, Excel, PowerPoint, LaTeX
- *Foreign Languages*: Fluent in Spanish, Basic Chinese

AWARDS & CERTIFICATES

- Certification in EpicCare Ambulatory through Epic 2014
- Certification in Epic Bridges (Interface Application) through Epic 2014
- Certification in Epic Server Development
- President's Honor Roll (3x)
- National Merit Scholar