VIVEK M. BADIANI, PhD

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Education

University of Cambridge
PhD, Chemistry, Queens' College
Oct 2018 – July 2022 | Cambridge, UK

University of Cambridge
MRes, Electrical Engineering & Condensed Matter Physics,
Oct 2017 – Sept 2018 | Cambridge, UK |
Grade: 75.4 % (Distinction)
Class rank: 3rd

University of Nottingham
BSc + MSci, Chemistry,
Oct 2013 – Jul 2017 | Nottingham, UK
Grade: 75.0 % (1st Class)

Skills

Backend engineering:
NodeJS | MongoDB | Express | Python

Frontend engineering:
ReactJS | JavaScript | HTML | CSS | Tailwind

Miscellaneous:
GitHub | Netlify | Affinity Designer | Figma

Breakthrough research:
Renewable energy | Catalysis | Solar energy | Chemicals | Enzymology | Technical writing

Awards

2x Engineering and Physical Sciences Research Council (EPSRC) Scholarships
Awarded a £90,152 scholarship over 5 years to fully fund my MRes and PhD programmes

Cambridge Judge Accelerate + Santander + ARM Holdings + BASF + BBSRC Biomakers awards
Won a total of £10,000 at various start-up competitions for eCO-SENSE.

Projects

Portfolio Website   GitHub
- My personal portfolio website was built from scratch using HTML, CSS and Vanilla JavaScript.

Book Identifier Application   GitHub
- This Book Identifier App was created using JavaScript, NodeJS, Express, MongoDB and Mongoose with an EJS template view engine in an MVC architecture.
- Utilisation of the OpenLibrary API allows rapid identification of a book by inputting only the ISBN number, and further metadata such as the title, author, book cover and genre are retrieved, stored in the database and displayed on the application.
- This application has solved the problem of knowing which books I own in my apartment, and which we no longer own or have lent to others.

Arquimedes' List   GitHub-server GitHub-client
- Allocating tasks and chores within a household is always ridden with miscommunication and stress.
- Arquimedes' List is a task app where users can create, edit, delete and assign tasks (CRUD) to a user and mark them as complete when done.
- This fullstack app was created using MongoDB, Express, React and NodeJS (MERN). The data is persisted on a hosted server, communicating with the client through REST endpoints.
- This application has made our household much more efficient at delegating and completing tasks.

Experience

Doctoral research   Cambridge, UK | Oct 18 – Jul 22
(www-reisner.ch.cam.ac.uk/)
- Designed, planned, and executed 3 successful large-scale projects resulting in 7 high-impact publications in prestigious journals (see Google Scholar for full list of publications).
- Established and maintained international collaborations with laboratories in Lisbon, Portugal and the US.
- Supervised Undergraduate, Erasmus and PhD students (overall 50+).
- Presented research at two seminars and two conferences.

Co-founder | eCO-SENSE   Cambridge, UK | Apr 19 – Mar 20
- Co-founded a precision agriculture technology company.
- Successfully raised £10,000 funding and partnered with ARM holdings, Judge Business School, and the UK Institute of Agriculture and Botany.
- Built and led a team of 6 engineers and completed a 2-week pilot test of our farming sensors in India.

Drug discovery intern|Chiesi Pharma   Parma, Italy | Sept 15 – Jun 16
- Worked in drug discovery research for lung disease as an intern for a year at one of Italy's biggest pharmaceutical companies.