VIVEK M. BADIANI, PhD

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Education

University of Cambridge
PhD, Materials Chemistry & Engineering,
Oct 18 – July 22 | Cambridge, UK

University of Cambridge
MRes, Electrical Engineering & Condensed Matter Physics,
Oct 17 – Sept 18 | Cambridge, UK | Grade: 75.4 % (Distinction)
Class rank: 3rd

University of Nottingham
BSc + MSci, Chemistry,
Oct 13 – Jul 17 | Nottingham, UK
Grade: 75.0 % (1st Class)

Skills

Backend engineering:
Node.js | MongoDB | Express | Python

Frontend engineering:
React.js | 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 | HTML | CSS | Vanilla JavaScript   GitHub
- My personal portfolio website was built from scratch where you can find further information about my projects, publications and motivations.

Book Identifier Application | Node.js | Express | MongoDB   GitHub
- Utilised the OpenLibrary API to allow rapid identification of a book by inputting only the ISBN number.
- Further metadata such as the title, author, book cover and genre are retrieved, stored in the database and displayed on the application using an EJS template view engine.
- Used an MVC architecture and deployed the application using Render.com.

Arquimedes' List | MongoDB | Express | React.js | Node.js   GitHub
- Designed and built a task app primarily using React.js where users can create, edit, delete and assign tasks to a user and mark them as complete when done.
- The application was styled using Tailwind CSS and deployed using Netlify (client) and Render.com (server).

Experience

Doctoral researcher   Cambridge, UK | Oct 18 – Jul 22
(www-reisner.ch.cam.ac.uk/)
- Designed, planned, and executed 3 successful large-scale projects in CO_2 utilisation, resulting in 7 high-impact publications in prestigious journals.
- Streamlined experimental workflows in the laboratory by scripting and automation of data analysis and visualisation of large datasets using Python, Matlplotlib, NumPy and pandas.
- 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
(https://twitter.com/ecosensetech)
- 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
- Contributed to drug discovery research for lung disease as an intern for a year at one of Italy's biggest pharmaceutical companies.

Publications

For a full list of publications, visit my Google Scholar.