# SHEKHAR NARAYANAN

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### Profile

With over three years of experience building end-to-end solutions for several scientists in India and The Netherlands, I have found my passion in telling stories through data and making life easier with reliable software. Trained as an engineer and researcher, I seek working in spaces that thrive with the collaboration of these fields.

# Passion Projects

### live\_stocks\_tracker | Python, Web development, Streamlit, OAuth, yfinance, SQL, CI/CD

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Developing a Web application where a user can track the US stock market without ads for free. Currently playing with FastAPI to securely link user database and streamlit.

### finance\_viz | Python, LangChain, Ollama, Local LLMs, Pandas, Plotly, Dash

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Building a dashboard to visualize my expenditures in the Netherlands. Currently working on generalizing pre-processing methods to extract meaningful data from financial statements.

# Professional Experience

Research Software Engineer | Data Steward



Tilburg University, Netherlands

Sept 2024 – Present

I work directly with researchers to automate and streamline their research process with software solutions.

- Worked on several API integration projects using Python, namely with the OpenAI API, CompaniesHouse API and YouTube API.
- **Gave workshops** on **improving code quality**, using **AI in research** and harnessing the power of **version control** using **Git**.
- Developed user-friendly applications using Python to simplify workflows and communicate technical progress to stakeholders.
- Actively involved with **preprocessing** and **delivering key insights** on data types ranging from **unstructured text** to **heart rate** and **skin conductance** signals.

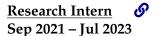
# RA, Brain-computer Interfacing Oct 2023 – Jul 2024



Data-Driven Neurotech Lab, Donders Institute, Netherlands

Worked as a Research Assistant to develop a brain-computer interface designed for people with ALS.

- Developed an **experimental paradigm** based using **Psychopy** in **Python**.
- Performed preprocessing, feature extraction, and decoding of neural data using machine learning methods like LDA, CCA.
- Gained proficiency in scikit-learn for model evaluation, and machine learning pipelines.



Worked as a research intern and a master's thesis student at the Genzel Lab.

- Independently developed end to end data extraction, feature engineering and visualization pipelines for neural data obtained from rats in MATLAB.
- Learned about best practices for coding, efficient communication and academic publishing.

### EDUCATION

#### Radboud University, Nijmegen, Netherlands

M.Sc. Natural Computing and Neurotechnology Sep 2021 – Sep 2023, GPA: 7.98

Manipal Institute of Technology, Manipal, India

B.Tech Electronics and Communication Engineering

Aug 2016 – Jul 2020, GPA: 7.38

### **PUBLICATIONS**

Towards Gaze-Independent C-VEP BCI: A Pilot Study. Graz BCI conference, 2024

Increased cortical plasticity leads to memory interference and enhanced hippocampal-cortical interactions. eLife, 2023

## Technical Skills

Programming: Python, MATLAB, SQL

**Machine Learning**: scikit-learn

**Data Manipulation**: pandas, NumPy **Visualization**: matplotlib, seaborn

Miscellaneous: Git, GitHub, CI/CD, AWS, API Integration

# Courses & Workshops

### Intermediate Research Software Development with Python workshop (2024)



Followed an in-person course by the eScience center on best software development practices, **modularity**, continuous integration and deployment along with test driven development in Python.

# Extracurriculars

#### Languages

English (Billingual), Hindi (Native), Dutch (A1)

#### **Hobbies**

Gym, Running, Creative Writing