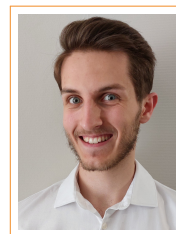# Noé Demange

✉ noe.demange@uvsq.fr
⌂ github.com/NoeDemange

Education

2024–Present	**PhD in Computer Science, title : Path Generation for the Synthesis of Molecular Cages**, *DAVID Lab., University of Versailles Saint-Quentin-en-Yvelines / Paris-Saclay*, Versailles, France, theses.fr/s402263. Supervisors: Yann Strozecki, Sandrine Vial
2022–2024	**Master's Degree in Algorithms and Modeling at the Interface of Sciences (AMIS)**, *University Paris-Saclay*, Versailles, France. Coursework: molecular modeling, graph theory, artificial intelligence, combinatorial optimization, databases, cryptography, networks, game theory Scholarship: MixtAI	Honors: Highest distinction
2019–2022	**Double Bachelor's Degree in Biology and Computer Science**, *University of Versailles Saint-Quentin-en-Yvelines*, Versailles, France. Computer Science: algorithms, C, Java, graph theory, databases, cryptography, networks Biology: genetics, transcription, translation, phylogeny, sequencing, molecular biology techniques Honors: Highest distinction
2019	**Scientific Baccalaureate (High School Diploma)**, *Lycée de la Haie Griselle*, Gérardmer, France. Major in Life Sciences	Honors: Highest distinction

Academic Responsibilities

2025–Present	**PhD Student Representative**, *DAVID Lab.*, University of Versailles Saint-Quentin-en-Yvelines.

Employment and Internships

Apr–Sep 2024	**Master's Internship**, *Laboratoire DAVID, UVSQ*, Versailles, France. In silico generation of organic molecular cages around target molecules. Path construction between binding motifs. Algorithms, molecular modeling, C language Supervisors: Yann Strozecki, Sandrine Vial
Mar–Jun 2024	**Academic Tutoring**, *Saclay AI School, UVSQ*, Versailles, France. Tutoring undergraduate computer science students
Jun–Jul 2023	**Research Internship**, *Laboratoire DAVID, UVSQ*, Versailles, France. Development of construction guides for organic molecular cages. Improvement of an existing C program and implementation of the A* algorithm. Team-based project Supervisors: Yann Strozecki, Sandrine Vial
2022–2024	**Student Ambassador**, *Université Paris-Saclay*. Presentation of academic programs at orientation fairs. Interaction with prospective students and families
2022	**Research Engineer (Freelance Status)**, *CHCSC, UVSQ*. Development of data analysis programs in R, Shiny applications (GitHub), Docker usage (96-hour mission)
Jun–Aug 2022	**Research Internship**, *CHCSC, UVSQ*. Development of a data analysis method based on double seriation Supervisor: Guillaume Sapriel
2021–2022	**Research Internship**, *Atelier de Bio-Informatique, ISYEB – MNHN*, Paris, France. Double seriation data analysis applied to genomic datasets. R language Supervisor: Guillaume Sapriel
Aug 2020	**Student Job**, *Marcillat Cheese Factory*, Corcieux, France. Production line work, logistics, teamwork under time constraints

━━━ Research Activities

Posters

2025 **MaDICS Symposium**.
Generation of construction guides for molecular cages

2025 **Université Paris-Saclay Research Days**.
Generation of construction guides for molecular cages

Talks

2024 **PhD Students Day**, *Laboratoire DAVID*.

Academic Service

2025 **Junior Program Committee Member**, *Junior Conference on Informatics: Theory and Applications (JITA)*.
Conference organization, call for papers, communication, peer reviewing

Supervision

2026 **Master's Project (M1)**, *Graph Drawing*.
Co-supervisor: Chloé Godet

2025 **Undergraduate Internships (L2)**, *Generation of Binding Motifs for Molecular Cage Construction*.
Supervisors: Noé Demange, Yann Strozecki, Sandrine Vial

2025 **Master's Project (M1)**, *Distance Computation in Discretized 2D/3D Spaces*.
Supervisors: Noé Demange, Yann Strozecki

━━━ Teaching Experience

2026 **Foundations of Computer Science II – Python Programming**, *University of Versailles Saint-Quentin-en-Yvelines*.
Undergraduate level (Year 1), 27h TD
Course coordinator: Mustapha Lebbah

2026 **Algorithms and Foundations for Data Science**, *University of Versailles Saint-Quentin-en-Yvelines*.
Statistics, Clustering, PCA
Undergraduate level (Year 3), 39h TD
Course coordinator: Sandrine Vial

2025 **Models of Computation and Complexity**, *University of Versailles Saint-Quentin-en-Yvelines*.
Pushdown automaton, Turing machine, other computational models, decidability, reduction, complexity class
Undergraduate level (Year 3), 27h TD
Course coordinator: Yann Strozecki

2024 **Data Structures and Algorithms**, *University of Versailles Saint-Quentin-en-Yvelines*.
Recursion, sorting, stacks/queues, trees, algorithms, and complexity
Undergraduate level (Year 2), 36h TD
Course coordinator: Sandrine Vial

━━━ Academic Projects

Oct 2023–Feb 2024 **Master's Project (M2)**, *AMIS Master's Program*.
Construction of cycle graphs of molecules and pairwise comparison using MCIS. Algorithms, molecular modeling, C, Python, R. Team of 4
Supervisors: Franck Quessette, Sandrine Vial

Jan–May 2023 **Master's Project (M1)**, *AMIS Master's Program*.
Generation of construction guides for organic molecular cages. Reuse and extension of previous PhD and internship code. C language. Team of 5
Supervisor: Sandrine Vial

Jan–May 2022 **Bachelor's Project (L3)**, *Double Degree in Biology and Computer Science*.
Implementation of the algorithm described in *A Dynamic Programming Algorithm for RNA Structure Prediction Including Pseudoknots* (Rivas & Eddy). C language. Team of 4
Supervisor: Sandrine Vial