

# Pooya Davoodi



## Education

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### **M.Sc. in Computer Science**

- School of Mathematics, Statistics and Computer Science, University College of Science, **University of Tehran**, Tehran, Iran.
- Period: 2004-2007
- GPA: 17.77/20
- Thesis
  - Title: Finding Maximal Pairs With Bounded Gap
  - Supervisors: Dr. Abbas Nowzari And Dr. Mahdi Sadeghi
  - Grade: 19.25/20
  - Abstract:

DNA sequence analysis such as motif finding (discovery of conserved patterns) and finding repeated sequences, is one of the important problems in molecular biology because of its many practical applications like understanding the gene regulation. Experimental methods for solving this problem are very tedious and time consuming with high cost and also there are large amounts of genome sequence data and gene expression micro-array data, therefore it seems that the best way is to solve the problem computationally. Most of these types of problems are considered as NP-Complete problems in computer science and there are various techniques to attack them such as heuristic algorithms.

In this thesis, different models for representing motifs and some algorithms for finding motifs (WINNOWER, Gibbs Sampler and CONSENSUS) are studied and some methods for testing these algorithms are given. An algorithm for finding maximal pairs with bounded gap is discussed. All of these algorithms are considered and finally their benefits, faults and difficulties are compared.

### **B.Sc. in Computer Science**

- School of Mathematics, Statistics and Computer Science, University College of Science, University of Tehran, Tehran, Iran.
- Period: 1999-2004
- GPA: 15.10/20
- Project:
  - Title: Identification And Verification Based On Iris Recognition.
  - Supervisor: Dr. Abbas Nowzari.
  - Grade: 19.5/20

- **Diploma In Mathematics And Physics**
  - o Shahid Hasan Ghadami High School, Tehran, Iran. (1995-1998).
  - o Adl Parvar School, Tehran, Iran. (1998-1999).
  - o GPA: 18.83/20

## Research Experiences

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- **DNA Sequence Analysis (Bioinformatics):**
  - o Extracting any interesting new features in some genomes such as gene clusters (In Progress). Under supervision of Dr. Masoudinejad. (Jul 2007-Present).
- **Gene Deserts (Bioinformatics):**
  - o Developing programs to find and analyze the gene deserts (some intergenic regions) (Nearly Finished). Under supervision of Dr. Masoudinejad. (Jan 2007-Present).
- **Pattern Discovery (Bioinformatics):**
  - o Designing a new algorithm for finding patterns in DNA sequences (Now In Testing Phase). Under supervision of Dr. Ahrabian and Dr. Nowzari and Dr. Mahdi Sadeghi. (2005-Present)
  - o Studying about different methods and algorithms in this field, such as statistical and heuristic methods (2005-Present).
- **DNA Computing:**
  - o Studying nearly 40 papers and trying to design a new algorithm. Under supervision of Dr. Nowzari. (2005-2006).
- **Biometrics:**
  - o Studying about different methods and algorithms in this field especially for iris recognition. Under supervision of Dr. Nowzari. (2003-2004).

## Work Experiences

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- **Teaching At University:**
  - o **University Of Tehran:**
    - Fundamentals of Computer (Subject: Biology, Geology, Chemistry) (2005-2007).
  - o University Of Applied Science And Technology (2004-Present):
    - Programming C/C++/C#/HTML/JavaScript (Subject: Computer)
    - Data Structures And Algorithms (Subject: Computer)

- Computer Workshop (Subject: Computer)
  - Compilers (Subject: Computer)
- Other Universities:
  - Microsoft Excel And Access (Subject: Accounting) (2006).
- **Supervision Of Final Projects:**
  - Supervise 13 undergraduate students to perform their final projects with the subject of developing web/windows based application with .NET and SQL Server (2006-Present).
- **Counseling:**
  - Educational counselor in the largest educational institution in Iran ([Kanoon Farhagi Amoozesh-Ghalamchi](#)) for National M.Sc. Entrance Examination for software engineering subject (2004).
- **Application Development:**
  - Developing some applications with C#2005 and MS Access and SQL Server (2006-Present).
- **Designing rules for final projects** of bachelor degrees in University Of Applied Science And Technology (ACECR-Sharif University Branch) (2007).
- **Designing simple peer to peer networks** (2004).

## Research Interests

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- Bioinformatics (Pattern Discovery, Genome Analysis)
- Combinatorial Algorithms
- Theory Of Computations
- Compilers
- Artificial Intelligence

## Ranks

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- **One of the 5 best teachers** among 50 ones in University Of Applied Science And Technology (ACECR-Sharif University Branch) (2007).
- **Ranked 14** among nearly 400 competitors in the Iran National **M.S. Entrance Examination** for computer science subject in 2004.
- **Ranked 100** among nearly 10000 competitors in the Iran National **M.S. Entrance Examination** for computer software engineering subject in 2004.
- **Ranked 1757** among 1,500,000 competitors in the Iran National University **Entrance Examination** in 1999.
- 2<sup>nd</sup> rank in high school among about 500 students based on final GPA (1999).

## Technical Skills

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- Programming with Pascal/C/C++ (Strong)/C#/Perl/Java/JavaScript/Prolog/MPI.
- Application development with .NET.
- Database design and working with MS Access and SQL Server (Basic).
- Strong writing in Persian language.

## Languages

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- Persian (Native)
- English
- Arabic (Basic)

## Interesting Courses

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- Programming (Undergraduate)
- Automata, Theory, Languages And Computation (Undergraduate)
- Fundamentals of Compilers (Undergraduate)
- Theory Of Computations (Undergraduate)
- Combinatorial Algorithms (Graduate)
- Theory Of Computer Science (Graduate)

## References

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- **Dr. Hayedeh Ahrabian**
  - o Associate Professor in Computer Science
  - o ahrabian@ut.ac.ir
  - o <http://www.fos.ut.ac.ir/~ahrabian/>
- **Dr. Abbas Nowzari**
  - o Assistant Professor in Computer Science
  - o nowzari@ut.ac.ir
- **Dr. Ali Masoudi-Nejad**
  - o Assistant Professor in Computational Biology
  - o amasoudin@ibb.ut.ac.ir

## Other Interests

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- Reading about philosophy, theology and policy.

## Personal Information

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- First Name: Pooya
- Last Name: Davoodi
- Gender: Male
- Birth Year: 1981
- Marital Status: Single
- Citizenship: Iranian
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