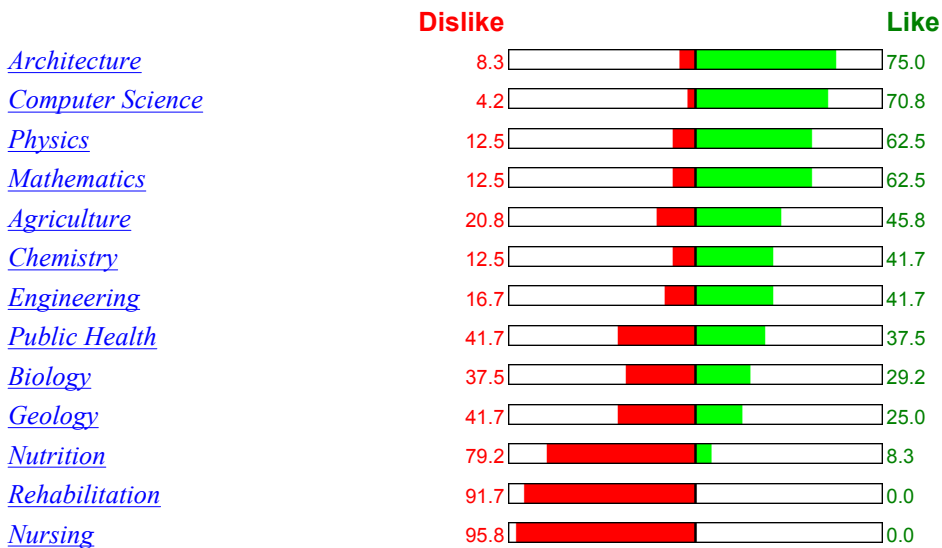# College Major Interest Test Report

Name: Jane

Assessment: Science and Technology
      100% of assessment completed

This report is a result of your responses to the **Science and Technology** assessment. This test covers 13 majors. Recommendations are listed in order of your stated interests. Accompanying each recommendation is a graphic representation of your responses, showing both your likes and dislikes. The numbers at either side of a graph are the percentages represented by the corresponding section of the graph.

Recommendations:

Major	Dislike		Like
Architecture	8.3		75.0
Computer Science	4.2		70.8
Physics	12.5		62.5
Mathematics	12.5		62.5
Agriculture	20.8		45.8
Chemistry	12.5		41.7
Engineering	16.7		41.7
Public Health	41.7		37.5
Biology	37.5		29.2
Geology	41.7		25.0
Nutrition	79.2		8.3
Rehabilitation	91.7		0.0
Nursing	95.8		0.0

It is important to realize that interest is only one important factor to consider when selecting a college major. You should also consider your abilities and skills. For more information on any major, click on its underlined title to see a detailed report.

Architecture

Overview:

Architects provide a wide variety of professional services to individuals, organizations, corporations, or government agencies planning a building project. Architects are involved in all phases of development of a building project, from the initial discussion of general ideas through construction. Their duties require a variety of skills - design, engineering, managerial, and supervisory.

Most architects work for architectural firms, builders, real estate firms, or other businesses that have large construction programs. Some work for government agencies; responsible for housing, planning, or community development. Employment opportunities are also found in the federal government, mainly for the Departments of Defense, Interior, Housing and Urban Development, and the General Services Administration.

Knowledge Requirements:

Knowledge areas are facts and principles needed to deal with problems and issues that are required by jobs. These knowledge areas are required by jobs found in this college major.

Knowledge	Knowledge Definitions
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Skill Requirements:

A skill is the ability to perform a task well. Skills are developed over time through training or experience. These skills are required by jobs found in this college major.

Skills	Skills Definitions
Mathematics	Using mathematics to solve problems.

Reading Comprehension	Understanding written sentences and paragraphs in work related documents.
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
Speaking	Talking to others to convey information effectively.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Coordination	Adjusting actions in relation to others' actions.
Operations Analysis	Analyzing needs and product requirements to create a design.
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
Writing	Communicating effectively in writing as appropriate for the needs of the audience.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
Time Management	Managing one's own time and the time of others.
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
Technology Design	Generating or adapting equipment and technology to serve user needs.
Science	Using scientific rules and methods to solve problems.

Jobs Related to the Major:

Architects, Except Landscape and Naval (O*NET #:17-1011.00)

o·net·   Click to view details on Internet.   Click to view video.

Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.

Job Tasks

Prepares information regarding design, structure specifications, materials, color, equipment, estimated costs, and construction time.

Plans layout of project.

Integrates engineering element into unified design.

Prepares scale drawings.

Consults with client to determine functional and spatial requirements of structure.

Conducts periodic on-site observation of work during construction to monitor compliance with plans.

Directs activities of workers engaged in preparing drawings and specification documents.

Prepares contract documents for building contractors.

Represents client in obtaining bids and awarding construction contracts.

Administers construction contracts.

Architectural Drafters (O*NET #:17-3011.01)

o·net· Click to view details on Internet.

Prepare detailed drawings of architectural designs and plans for buildings and structures according to specifications provided by architect.

Job Tasks

Draws rough and detailed scale plans, to scale, for foundations, buildings, and structures, according to specifications.

Prepares colored drawings of landscape and interior designs for presentation to client.

Lays out and plans interior room arrangements for commercial buildings, and draws charts, forms, and records, using computer assisted equipment.

Develops diagrams for construction, fabrication, and installation of equipment, structures, components, and systems, using field documents and specifications.

Lays out schematics and wiring diagrams used to erect, install, and repair establishment cable and electrical systems, using computer equipment.

Traces copies of plans and drawings, using transparent paper or cloth, ink, pencil, and standard drafting instruments for reproduction purposes.

Drafts and corrects topographical maps to represent geological stratigraphy, mineral deposits, and pipeline systems, using survey data and aerial photographs.

Calculates heat loss and gain of buildings and structures to determine required equipment specifications, following standard procedures.

Builds landscape models, using data provided by landscape architect.

Landscape Architects (O*NET #:17-1012.00)

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Plan and design land areas for such projects as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.

Job Tasks

Prepares site plans, specifications, and cost estimates for land development, coordinating arrangement of existing and proposed land features and structures.

Compiles and analyzes data on conditions, such as location, drainage, and location of structures for environmental reports and landscaping plans.

Inspects landscape work to ensure compliance with specifications, approve quality of materials and work, and advise client and construction personnel.

Confers with clients, engineering personnel, and architects on overall program.

Marine Architects (O*NET #:17-2121.02)

o·net· Click to view details on Internet.

Design and oversee construction and repair of marine craft and floating structures such as ships, barges, tugs, dredges, submarines, torpedoes, floats, and buoys. May confer with marine engineers.

Job Tasks

Oversees construction and testing of prototype in model basin and develops sectional and waterline curves of hull to establish center of gravity, ideal hull form, and buoyancy and stability data.

Confers with marine engineering personnel to establish arrangement of boiler room equipment and propulsion machinery, heating and ventilating systems, refrigeration equipment, piping, and other functional equipment.

Designs complete hull and superstructure according to specifications and test data, in conformity with standards of safety, efficiency, and economy.

Designs layout of craft interior, including cargo space, passenger compartments, ladder wells, and elevators.

Studies design proposals and specifications to establish basic characteristics of craft, such as size, weight, speed, propulsion, displacement, and draft.

Evaluates performance of craft during dock and sea trials to determine design changes and conformance with national and international standards.

Computer Science

Overview:
The computer is being used in nearly every walk of life. Few industries can be found which do not use computers either directly or indirectly. A computer professional must be prepared to deal with the design and implementation of computer systems. Training in computer science varies among basic systems. The current demand for graduates is high, and the job outlook should remain positive through the next decade.

Knowledge Requirements:
Knowledge areas are facts and principles needed to deal with problems and issues that are required by jobs. These knowledge areas are required by jobs found in this college major.

Knowledge	Knowledge Definitions
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
Education and Training	Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
Clerical	Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Communications and Media	Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.

Skill Requirements:
A skill is the ability to perform a task well. Skills are developed over time through training or experience. These skills are required by jobs found in this college major.

Skills	Skills Definitions
Programming	Writing computer programs for various purposes.
Operations Analysis	Analyzing needs and product requirements to create a design.
Troubleshooting	Determining causes of operating errors and deciding what to do about it.

Reading Comprehension	Understanding written sentences and paragraphs in work related documents.
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.
Mathematics	Using mathematics to solve problems.
Speaking	Talking to others to convey information effectively.
Technology Design	Generating or adapting equipment and technology to serve user needs.
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
Writing	Communicating effectively in writing as appropriate for the needs of the audience.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Science	Using scientific rules and methods to solve problems.
Installation	Installing equipment, machines, wiring, or programs to meet specifications.
Coordination	Adjusting actions in relation to others' actions.
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
Instructing	Teaching others how to do something.

Jobs Related to the Major:

Computer Systems Analysts (O*NET #:15-1051.00)

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Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. May analyze or recommend commercially available software. May supervise computer programmers.

Job Tasks

Analyzes and tests computer programs or system to identify errors and ensure conformance to standard.

Consults with staff and users to identify operating procedure problems.

Formulates and reviews plans outlining steps required to develop programs to meet staff and user requirements.

Devises flow charts and diagrams to illustrate steps and to describe logical operational steps of program.

Writes documentation to describe and develop installation and operating procedures of programs.

Coordinates installation of computer programs and operating systems, and tests, maintains, and monitors computer system.

Reads manuals, periodicals, and technical reports to learn how to develop programs to meet staff and user requirements.

Writes and revises program and system design procedures, test procedures, and quality standards.

Reviews and analyzes computer printouts and performance indications to locate code problems.

Modifies program to correct errors by correcting computer codes.

Computer Software Engineers, Systems Software (O*NET #:15-1032.00)

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Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications. Set operational specifications and formulate and analyze software requirements. Apply principles and techniques of computer science, engineering, and mathematical analysis.

Job Tasks

Analyzes software requirements to determine feasibility of design within time and cost constraints.

Analyzes information to determine, recommend, and plan layout for type of computers and peripheral equipment modifications to existing systems.

Consults with engineering staff to evaluate interface between hardware and software and operational and performance requirements of overall system.

Evaluates factors such as reporting formats required, cost constraints, and need for security restrictions to determine hardware configuration.

Formulates and designs software system, using scientific analysis and mathematical models to predict and measure outcome and consequences of design.

Confers with data processing and project managers to obtain information on limitations and capabilities for data processing projects.

Develops and directs software system testing procedures, programming, and documentation.

Coordinates installation of software system.

Monitors functioning of equipment to ensure system operates in conformance with specifications.

Consults with customer concerning maintenance of software system.

Computer Programmers (O*NET #:15-1021.00)

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Convert project specifications and statements of problems and procedures to detailed logical flow charts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program web sites.

Job Tasks

Analyzes, reviews, and rewrites programs, using workflow chart and diagram, applying knowledge of computer capabilities, subject matter, and symbolic logic.

Converts detailed logical flow chart to language processable by computer.

Resolves symbolic formulations, prepares flow charts and block diagrams, and encodes resultant equations for processing.

Develops programs from workflow charts or diagrams, considering computer storage capacity, speed, and intended use of output data.

Prepares or receives detailed workflow chart and diagram to illustrate sequence of steps to describe input, output, and logical operation.

Compiles and writes documentation of program development and subsequent revisions.

Revises or directs revision of existing programs to increase operating efficiency or adapt to new requirements.

Consults with managerial and engineering and technical personnel to clarify program intent, identify problems, and suggest changes.

Writes instructions to guide operating personnel during production runs.

Prepares records and reports.

Computer Software Engineers, Applications (O*NET #:15-1031.00)

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Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team.

Job Tasks

Analyzes software requirements to determine feasibility of design within time and cost constraints.

Analyzes information to determine, recommend, and plan layout for type of computers and peripheral equipment modifications to existing systems.

Consults with engineering staff to evaluate interface between hardware and software and operational and performance requirements of overall system.

Evaluates factors such as reporting formats required, cost constraints, and need for security restrictions to determine hardware configuration.

Formulates and designs software system, using scientific analysis and mathematical models to predict and measure outcome and consequences of design.

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