



## INVESTIGATION OF NEVŞEHİR VOLCANIC TUFF NATURAL STONES IN TERMS OF GLAZE AND ARTISTIC DESIGN (APPLICATION PRINTOUT WITH WALL PANEL EXAMPLE)



### Project Leader

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This study is conducted within the scope of the AYP24-1  
Specialization Project.



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## “ THE AIM OF THE PROJECT ”

The project aims to create aesthetic and artistic surface applications by decorating, glazing, and firing tuff stones using electric and alternative firing methods. In addition to the stones sourced from quarries in Nevşehir, waste stones will also be used as design elements, contributing to sustainability and establishing a cultural connection with the region's natural structure while presenting artistic interpretations. One of the most important goals of the project is to develop glaze formulas compatible with the stone surfaces, offering an alternative to ceramic wall panels by designing aesthetic, durable, long-lasting, and decorative surface applications. Prototype panels will be created by applying body-compatible glazes to stone surface designs. A wall panel will be installed in a designated interior or exterior space within the university's shared areas. The project aims to provide architects, stonemasons, designers, and ceramic workshops with a new vision, increase the use of stone in architectural structures, offer a different perspective in decorative applications, and contribute to the region's economic development.



## “ THE SIGNIFICANCE OF THE PROJECT ”

Volcanic tuff stone, which is soft when first extracted from quarries but hardens over time due to exposure to air, sun, and wind, has been used for centuries as a natural insulation material. In addition to utilizing Nevşehir's unique cultural stone as a building material, the project aims to highlight the stones' uniqueness from an artistic and technological perspective, adding originality to facades. Within the scope of Avanos Vocational School of Fine Arts, the Faculty of Fine Arts' Ceramics and Glass Department, and the Avanos Ceramics Application and Research Center, professional glaze trials and firings will be conducted on Nevşehir stones, and the results will be recorded. Successful glaze recipes that adhere to the stone surfaces will be recreated by adding pigment colors/oxides to achieve various colored glazes. After completing the research-development-technological-application-installation processes, scientific publications will be prepared, contributing to the literature in line with scientific principles and processes, and achieving artistic-scientific gains. Artistic surface designs for architectural interior/exterior stone cladding, wet walls, and floors will be created, showcasing glazed and patterned stone cladding examples. These will be exhibited in relevant locations, and informational meetings will be held to promote alternative applications.

## “ THE IMPACT OF THE PROJECT ON REGIONAL DEVELOPMENT ”

The project aims to create technological, artistic, and aesthetic designs on the surface of Nevşehir stone, which is already prominent in the market through industrial production and natural stone processing. By producing alternative facade designs for the region and other cities, it will contribute economically to related sectors, forming a significant criterion.

Nevşehir stone is a material with commercial value in the region and is used as a surface cladding in buildings. By adding aesthetic touches to these stones, which are currently used in their raw form, and subjecting them to decoration, glazing, and firing processes, the project will design alternative facade claddings and increase their preference in the region's architectural structures.

Within the scope of sustainability, the project will utilize waste stones, emphasizing environmental sensitivity in terms of transformation, with sustainability and cost-effectiveness as guiding principles.

After completing the design, surface treatments, glazing, and firing processes, the stones will be installed on facades in shared areas of the university.

Glazed applications on stones will be introduced to craftsmen, stakeholders involved in the production process, and interested individuals through seminars, workshops, and various events, raising awareness about the sale of glazed and decorated stones. These promotional activities will also foster awareness about their commercialization.

The project aims to enhance the aesthetic qualities of the region's architectural structures and contribute to regional development through surface and artistic dynamics.

By offering a new product range specific to the region, produced from glazed and decorated Nevşehir stones in ceramic workshops, the project expects to create a new market for sales. Additionally, the sale of various souvenir items by regional actors could bring economic benefits to many sectors in different fields.

Regarding the scientific, artistic, technological, sustainable, and economic uses of Nevşehir stone, seminars will be organized for NEVÜ students in related fields. These seminars will include material demonstrations, information on the compatibility of the material with glazes, and examples from the project, aiming to promote and disseminate knowledge. The same information will also be shared with ceramic workshops, potters, and stonemasons.

## “ THE OUTCOMES OF THE PROJECT ”

- ▶ During the project, scientific, technical, and technological experimental studies will be conducted to investigate glaze recipes and colored derivatives suitable for the surface of Nevşehir stone. This work aims to contribute to the literature and practitioners, and to be transformed into scientific publications.
- ▶ Nevşehir stone is currently used in its raw form in regional structures. By arranging surface compositions with an artistic and professional approach, the project aims to bring innovation to architectural structures through unique and alternative examples.
- ▶ The goal is to popularize such designs and increase the use of glazed stones in architectural structures both within the region and in other cities.
- ▶ The project also seeks to create alternatives to ceramic wall panels and ceramic surfaces.
- ▶ Using raw materials sourced from the region, suitable glaze recipes will be developed for the stones. Research and development (R&D) efforts will be completed to establish standardization and document the findings, contributing to the literature.
- ▶ By installing these designs on suitable facades of NEVÜ buildings, the project will serve as an example of alternative designs/ideas for regional architects, craftsmen, and workshops, promoting the widespread use of such artistic panel applications.
- ▶ The project will provide new perspectives for NEVÜ students and faculty in the fields of art and craft, offering guidance on how to apply these techniques in their work.
- ▶ It aims to produce and popularize aesthetic designs for architectural facades.
- ▶ The production and application process is expected to create and develop new business opportunities for regional stakeholders. Stone-producing companies anticipate the emergence of a new market for alternative products beyond their standard offerings.
- ▶ The artistic designs on stones, developed during the R&D phase through experimental glaze applications, will contribute to the literature and art field through articles, conferences, symposiums, workshops, and other publications.
- ▶ Finally, the project aims to create alternatives to ceramic wall panels.

## “ PROJECT TEAM ”

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- ▶ Researcher: Lecturer Bahadır Cem ERDEM
- ▶ Researcher: Research Assistant Ferit Cihat SERTKAYA